

No. 10209

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TABLE OF CONTENTS.

ATLAS WESTERN MIDDLE ANTHRACITE FIELD, PART I.

Eleven sheets relating to the eastern portion of the Mahanoy-Shamokin Basin between Delano, in Schuylkill county, and Mt. Carmel, in Northumberland county.

4 MINE SHEETS, scale 800 feet to 1 inch, $\frac{1}{9600}$ ths of nature, showing the plan of all the mines and the shape of the floor of the Mammoth Bed, where mined, and its most probable structure in undeveloped areas, by contour curve lines, 50 feet apart.

1. No. I, DELANO SHEET, between Delano and Mahanoy City, in Schuylkill county.
2. No. II, SHENANDOAH SHEET, between Mahanoy City, Shenandoah and Gilberton, in Schuylkill county.
3. No. III, GIRARDVILLE SHEET, in vicinity of Frackville and Girardville, in Schuylkill and Columbia counties.
4. No. IV, ASHLAND SHEET, in vicinity of Ashland, Locust Dale, Centralia, and Montana, in Schuylkill, Columbia, and Northumberland counties.

3 TOPOGRAPHICAL SHEETS, scale 1600 feet to 1 inch $\frac{1}{19200}$ ths of nature, showing the topography of the surface by contour curve lines, 10 feet apart.

5. No. I, MAHANOEY CITY AND DELANO SHEET, in the vicinity of Quakake Junction, Delano, and Mahanoy City, in Schuylkill county; embraces area on Mine Sheet No. I.
6. No. II, SHENANDOAH AND GIRARDVILLE SHEET, in the vicinity of Mahanoy City, Shenandoah, Frackville, and Girardville, in Schuylkill and Columbia counties; embraces area on Mine Sheets Nos. II and III.
7. No. III, ASHLAND AND MT. CARMEL SHEET, in the vicinity of Ashland, Locust Dale, Centralia, Montana, and Mt. Carmel, in Schuylkill, Columbia, and Northumberland counties; embraces area on Mine Sheets Nos. IV and V.

4 CROSS SECTION SHEETS containing vertical cross sections exhibiting the geological structure of the coal beds. Scale of sections 400 feet to 1 inch, $\frac{1}{4800}$ ths of nature.

8. No. I SHEET contains 4 sections between East Mahanoy tunnel and West Mahanoy City.
9. No. II SHEET contains 5 sections between West Mahanoy City and Mahanoy Plane.
10. No. III SHEET contains 4 sections between Mahanoy Plane and Girardville.
11. No. IV SHEET contains 2 detail and 11 skeleton sections between East Mahanoy tunnel and Locust Dale.

NOTES.—Columnar Section sheets and other illustrations relating to the area covered by the above sheets will be published in Part II.

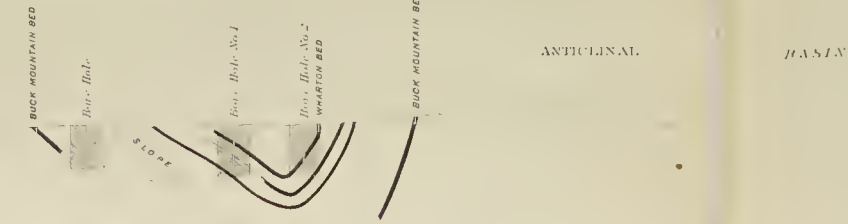
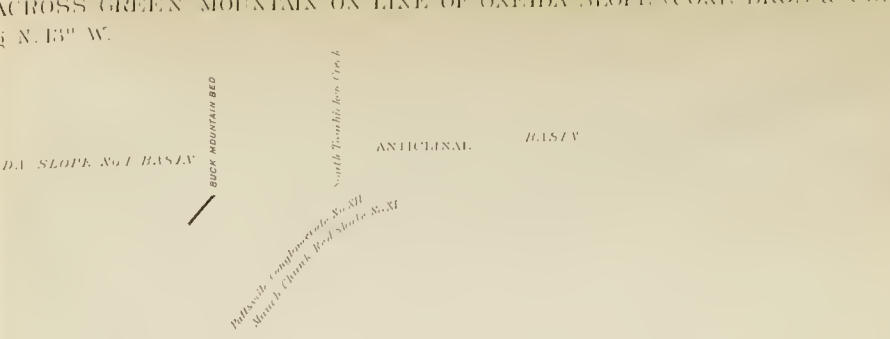
Single, unfolded copies of the above sheets can be obtained, at cost of printing, by addressing

CHAS. A. ASHBURNER,
Geologist in Charge,
907 Walnut Street, Philadelphia.

[Copyright, 1884, by William A. Ingham, Secretary Board of Commissioners, Second Geological Survey of Pennsylvania.]

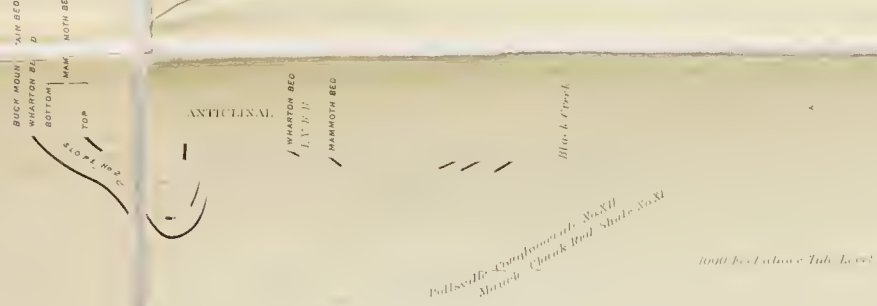
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GREEN MOUNTAIN BASINS, SECTION No. 43, ON MINE SHEET No. X, THROUGH HORN HOLE'S AND PROXINGS BY LINDERMAN & SKIFFER AND THE GREEN MOUNTAIN SLOPE, LEHIGH & WILKE'S BARRE COAL CO.

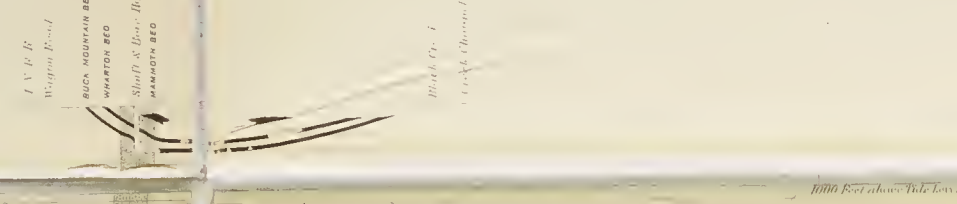
10000 *Ex tuberosa*, *Tuber* *La* *La*.

1000 Feet above Tide Level

SKELETON MAP
OF
MINE SHEETS Nos. XI, XII, XIII, XIIIa, XIV & XIVa
AND
PART OF No. X



McCORMICK MOUNTAIN BASIN-SECTION No 50, ON
MINE S SHEET No XIV, THROUGH MINE WORKINGS OF
W S C ORBITT & CO ON LINE OF LOSEY'S TUNNEL.
* = Bearing N. 6° 15' W

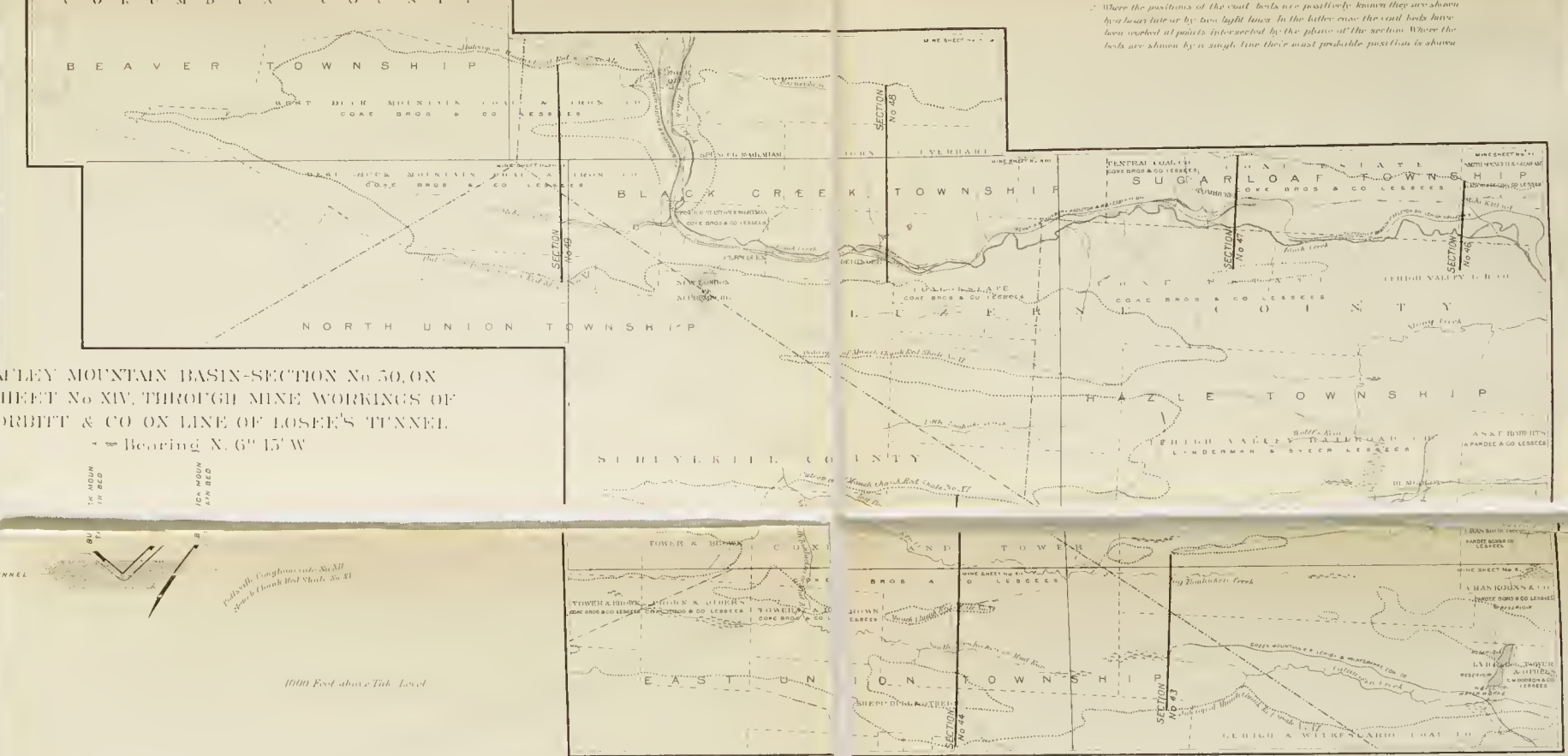


POSITION OF THE COLUMNAR SECTIONS
ON SHEET VI
Scale, 1 mile to 1 inch.

Notes

1. The *harpax* of the strids has only been determined in the localities where the various birds have strided. No detailed information respecting the exact birds and intermediate strids, see the *Isomeric Strid* sheets.

2. Where the positions of the card birds are positively known they are shown by lines later by two light lines in the latter case the card birds have been worked at points intersected by the plane of the section. Where the birds are shown by a single line their exact probable position is shown



Geological Map of the Area around the Mouth of the North Branch of the Potomac River

Scale: 0 to 10 miles

North Arrow

Geological Formations:

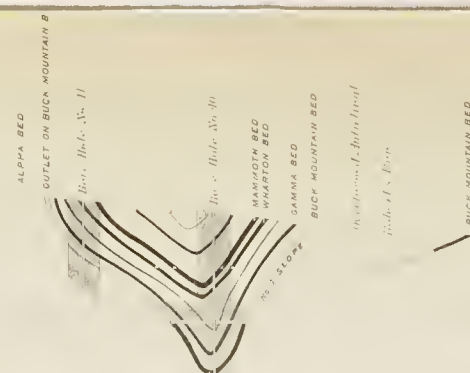
- Alpha Bed
- Beta Bed
- Gamma Bed
- Delta Bed
- Epsilon Bed
- Zeta Bed
- Eta Bed
- Theta Bed
- Iota Bed
- Kappa Bed
- Lambda Bed
- Mu Bed
- Nu Bed
- Xi Bed
- Omicron Bed
- Pi Bed
- Rho Bed
- Sigma Bed
- Tau Bed
- Upsilon Bed
- Phi Bed
- Chi Bed
- Psi Bed
- Omega Bed

Other Features:

- Potomac River
- Mouth of the North Branch of the Potomac River
- Various towns and locations (e.g., Washington, D.C., Annapolis, Md., etc.)

1000 First above Tikh Level

WEST FLICK MOUNTAIN
ANTICLINAL.



EASTERN WOOD LAMINATE PEBBLES - 6000 SEC SHEET NO. 11

A.A.

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PB8m

AD

2760

PB8m

4001

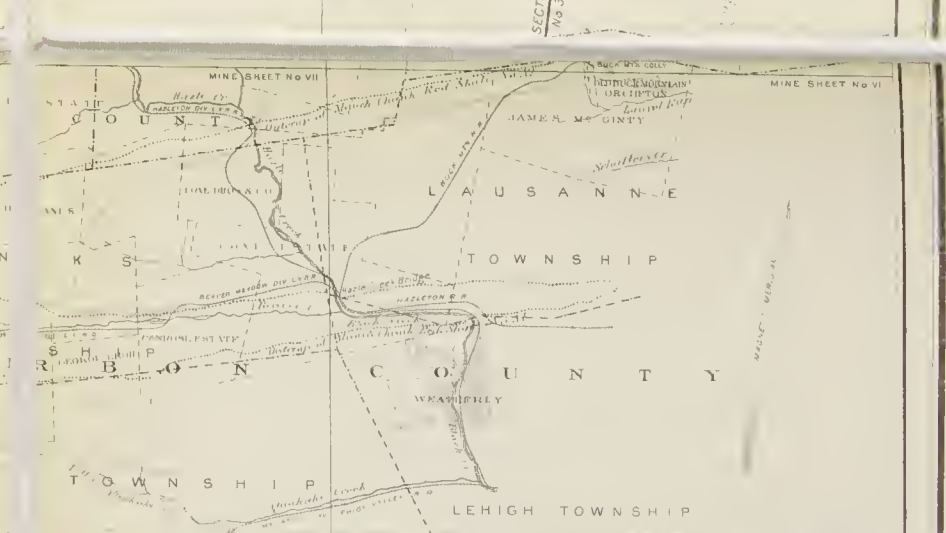
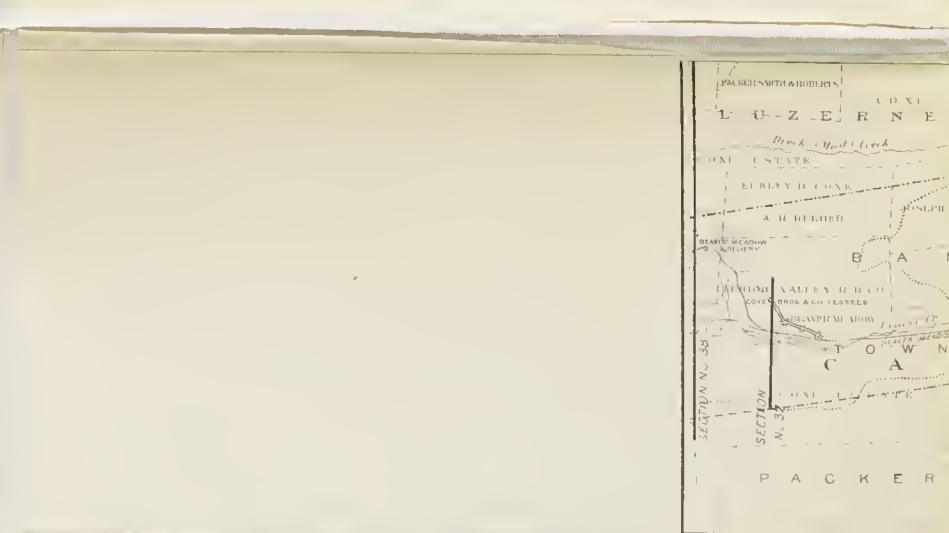
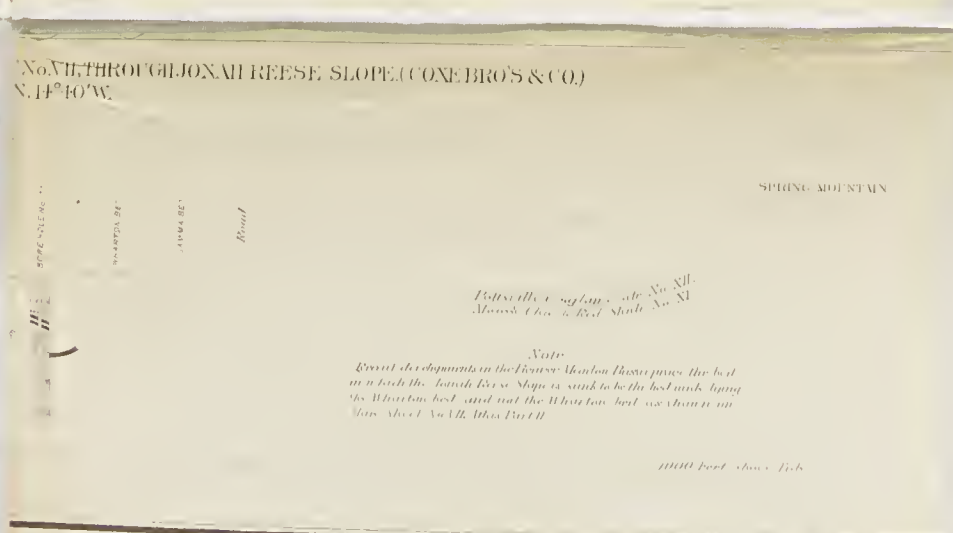
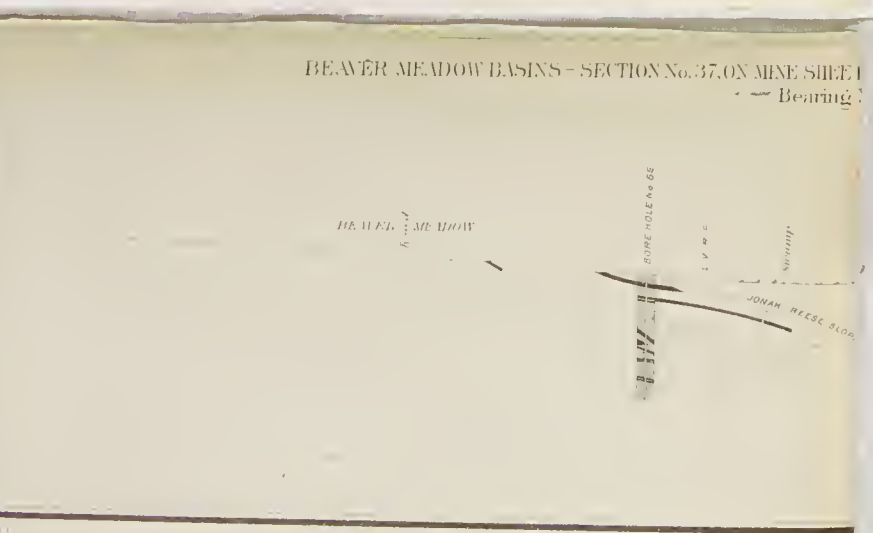
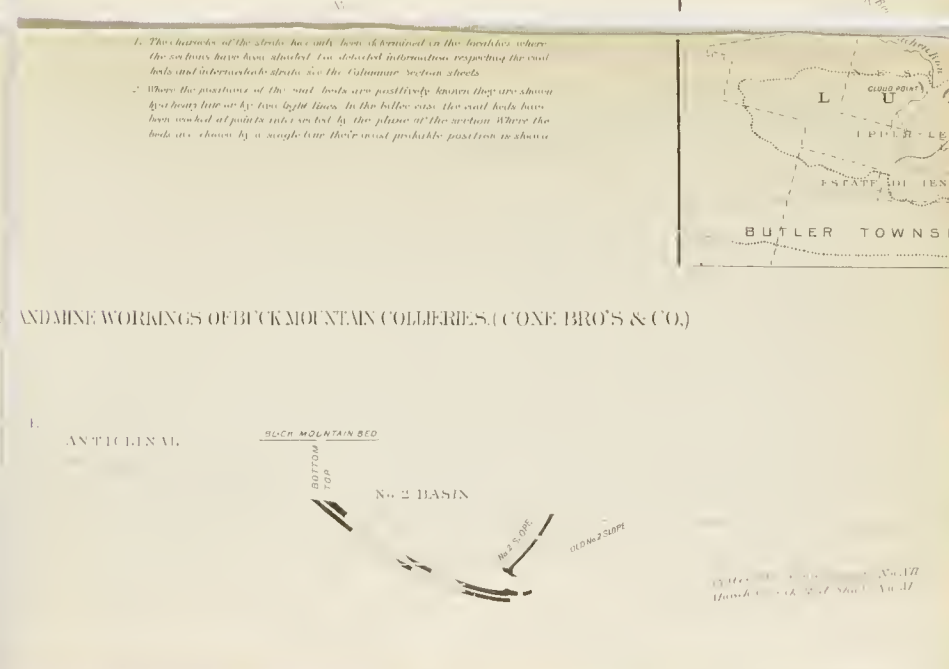
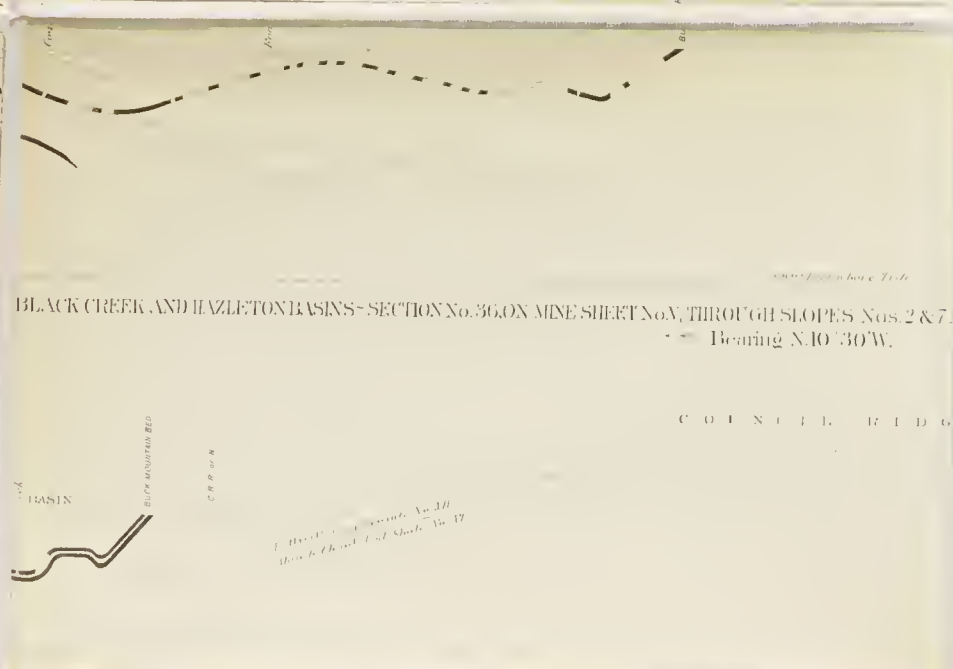
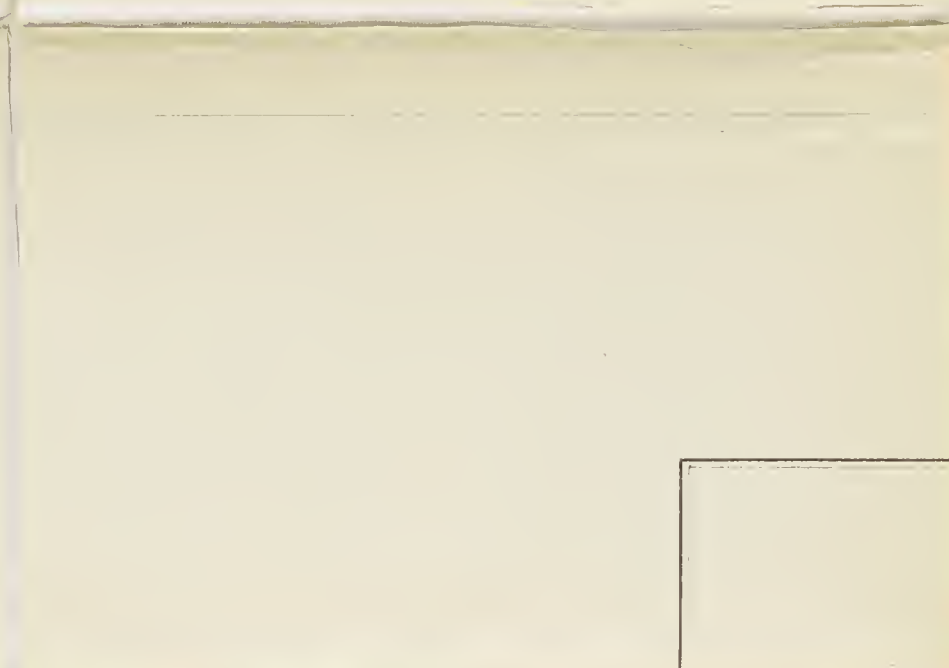
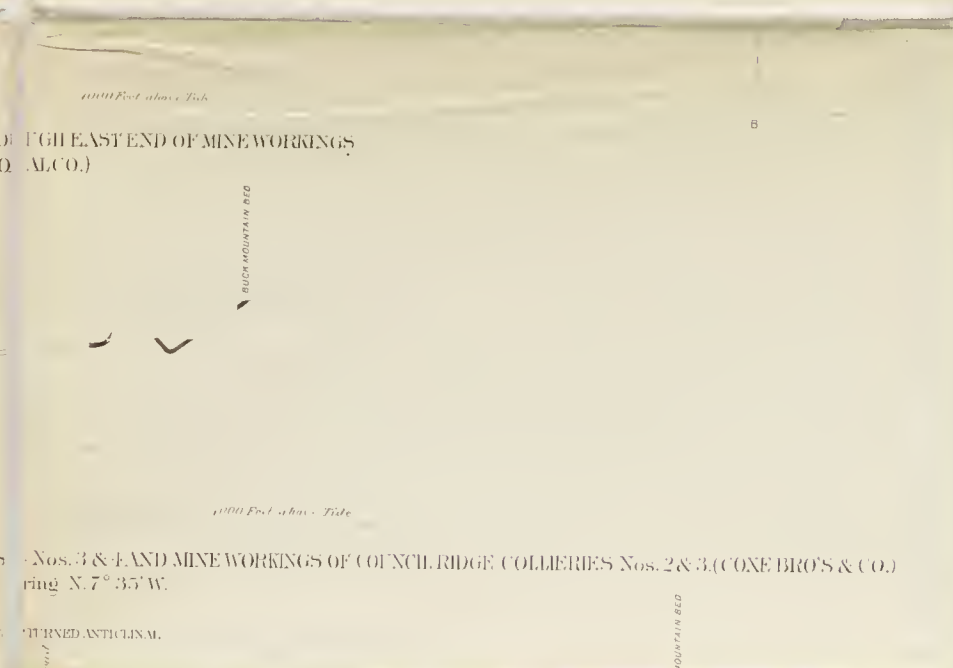
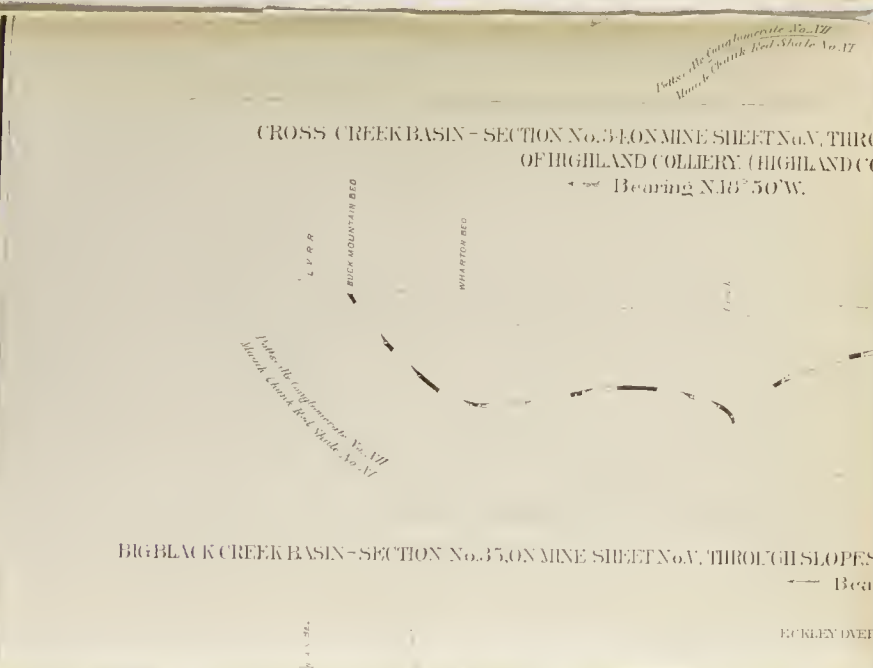
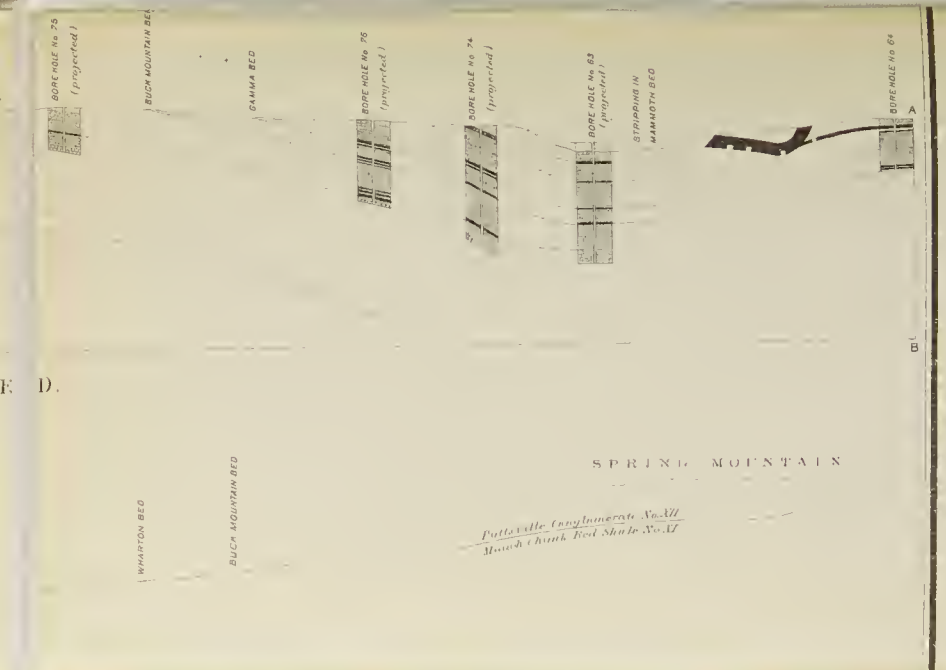
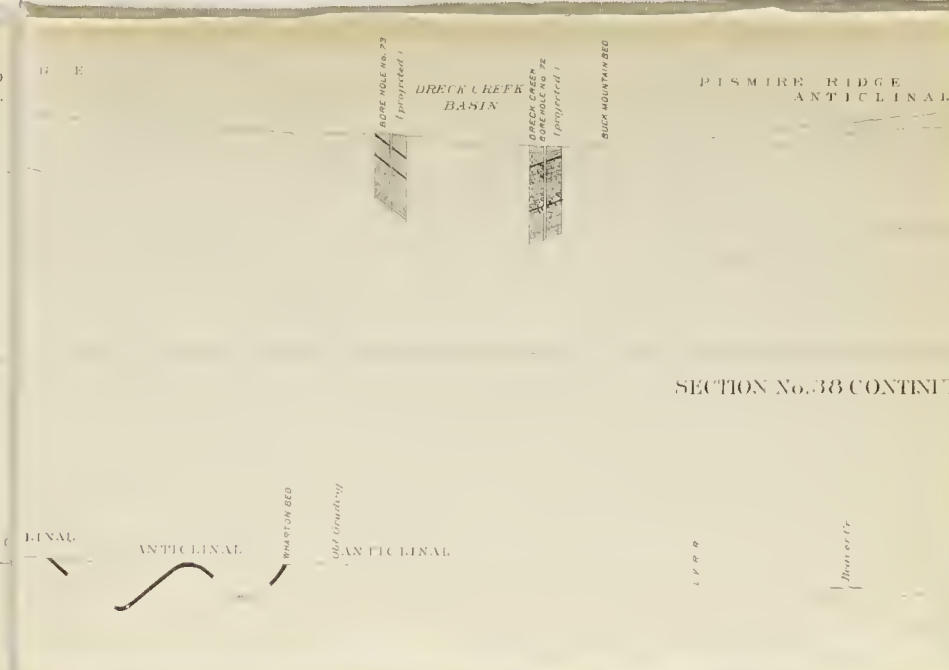
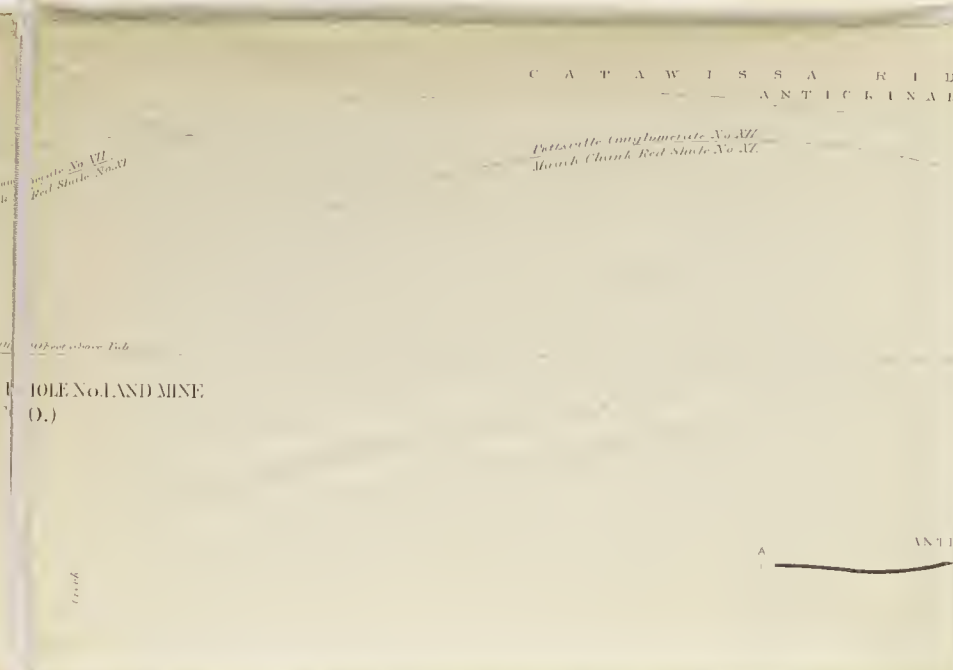
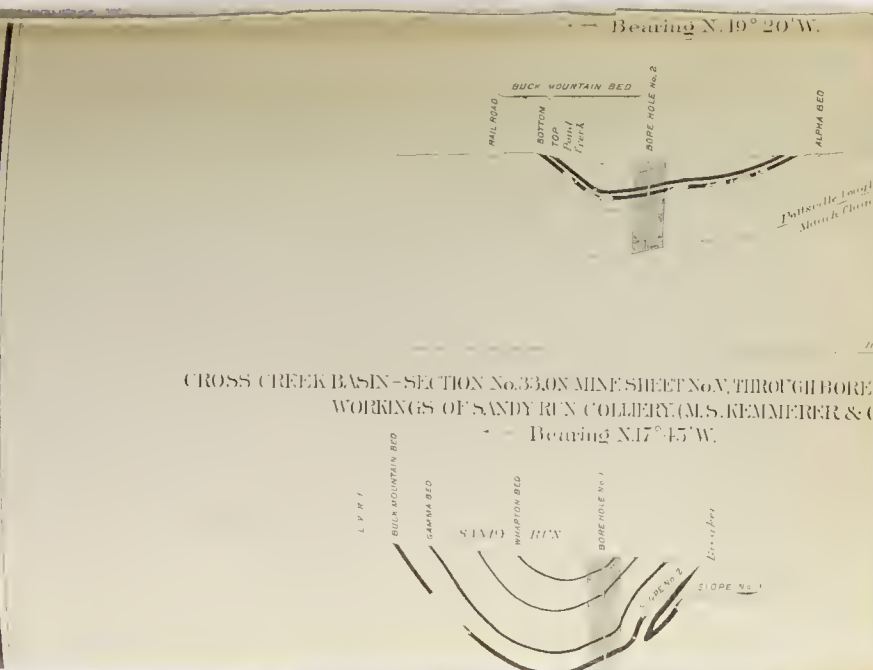
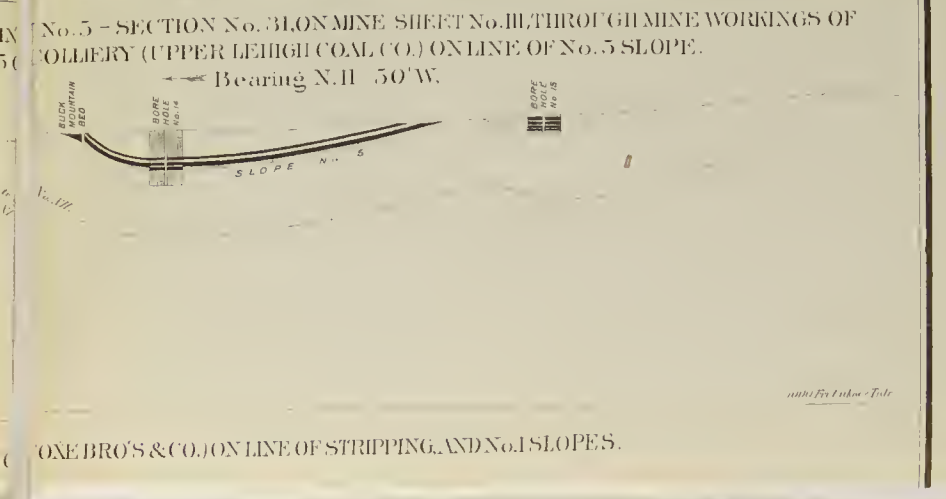
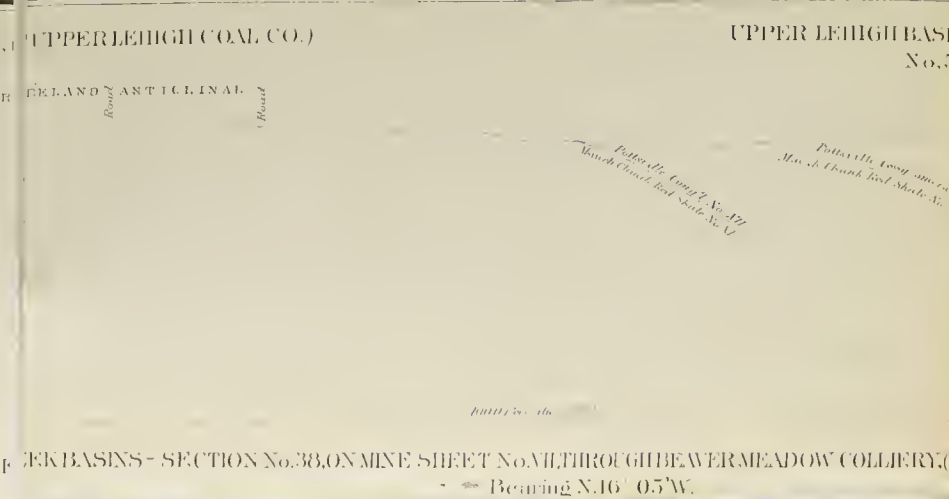
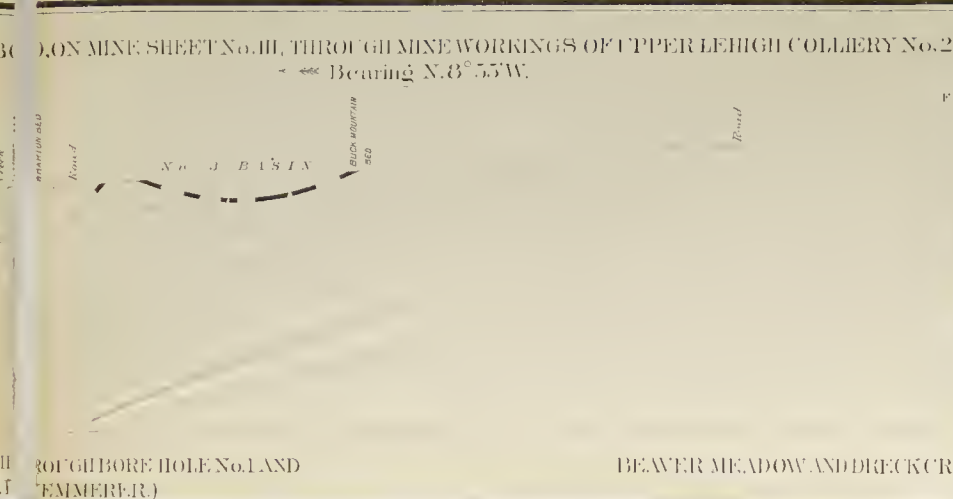
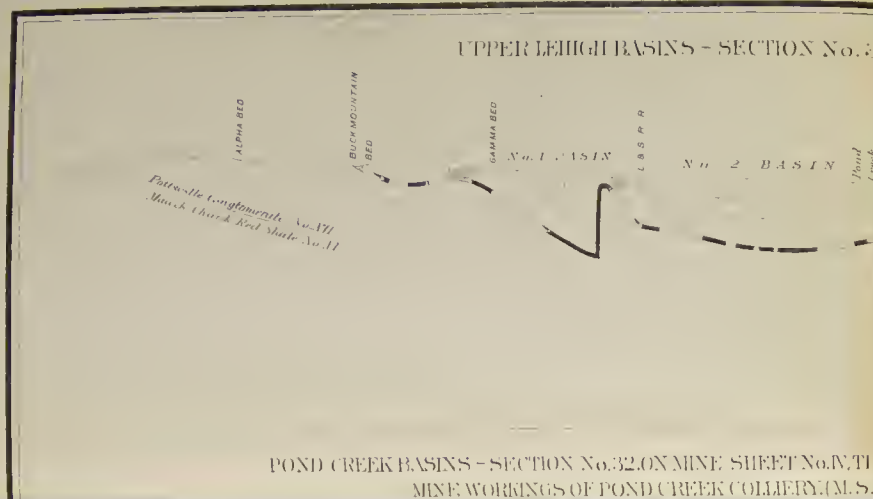
6000-10



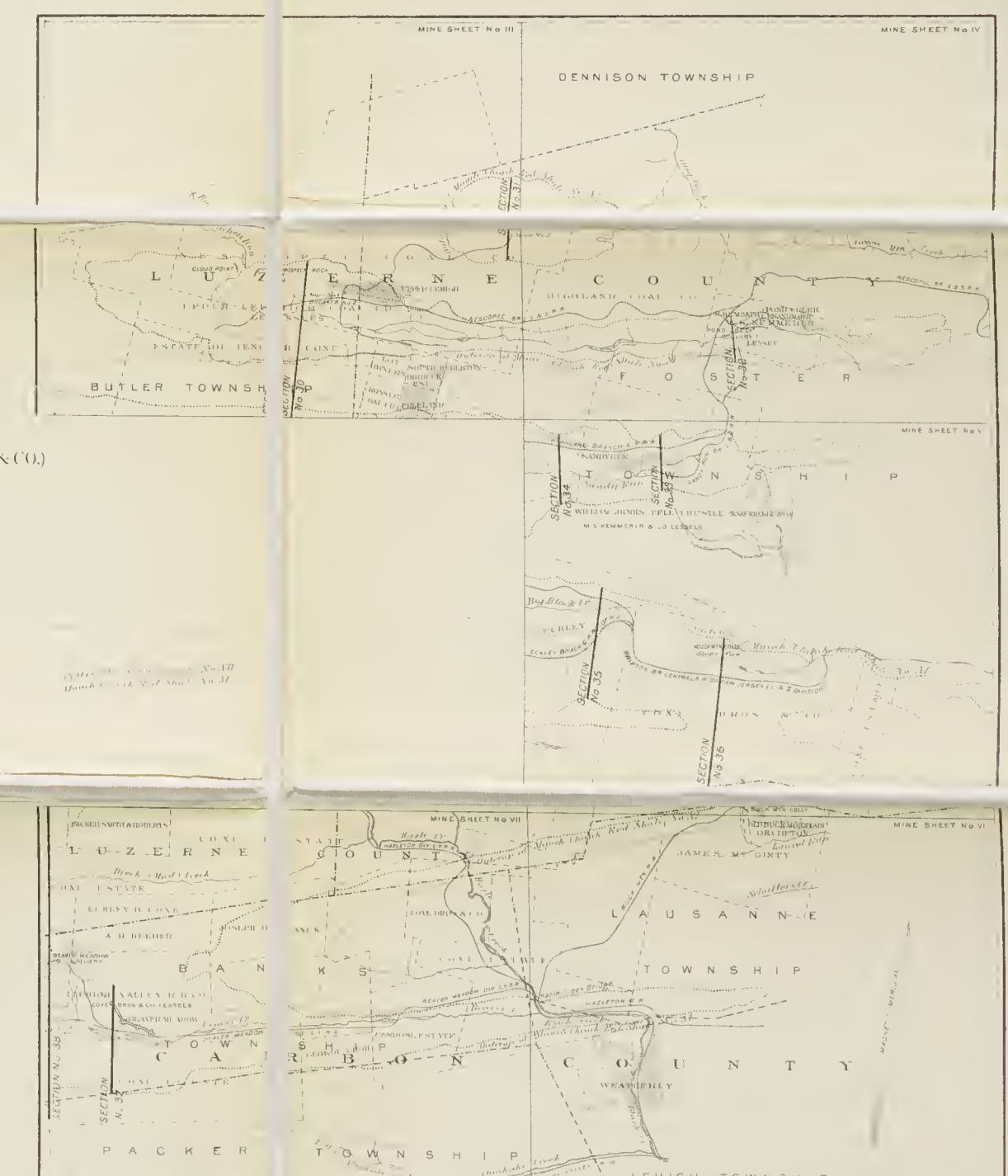
UPPER LEHIGH BASIN - SECTION No. 30 ON MINE SHEET No. III, THROUGH MINE WORKINGS OF UPPER LEHIGH COLLIERY No. 2, (UPPER LEHIGH COAL CO.)

GEOLOGICAL SURVEY OF PENNSYLVANIA. J. P. LESLEY, STATE GEOLOGIST.
ANTHRACITE DISTRICT. FRANK A. HILL, GEOLOGIST IN CHARGE.

EASTERN MIDDLE COAL FIELD. CROSS SECTION SHEET No. IV.



SKELETON MAP OF MINE SHEETS Nos. III, IV, V, VI & VII. SHOWING THE POSITION OF THE CROSS SECTIONS OR SECTIONS. Scale 1 mile to 1 inch.



JOHN LESLEY, ASSISTANT GEOLOGIST

Scale 1 mile to 1 inch

MAY 1 1889

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SPRING MOUNTAIN, BEAVER MEADOW, TRESCROW, HONEY BROOK,
JEANESVILLE, DRECK CREEK AND HAZLETON BASINS. LUZERNE, CARBON AND SCHUYLK
COUNTIES.

BEAVER MEADOW AND DRECK CREEK BASINS. SECTION No. 39, MINE SHEET No. VII, THROUGH THE WEST END OF THE BEAVER MEADOW PROPERTY (COKE BROS. & CO. LESSEES) ON LINE OF SLOPE No. 7. (TEMPERANCE.)



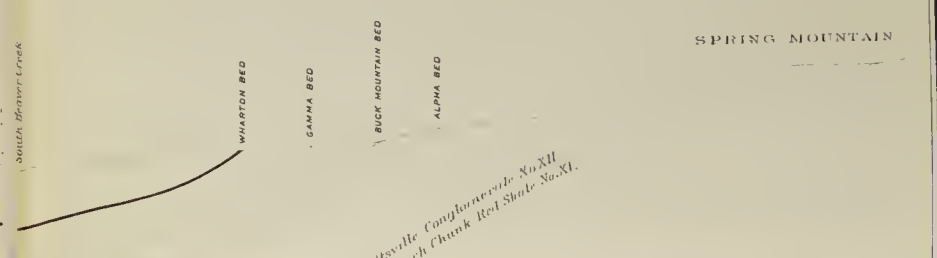
JEANESVILLE AND HONEY BROOK BASINS. SECTION No. 40, ON MINE SHEET No. VII, THROUGH THE WEST END OF THE BEAVER MEADOW PROPERTY (COKE BROS. & CO. LESSEES) ON LINE OF SLOPE No. 7. (TEMPERANCE.)



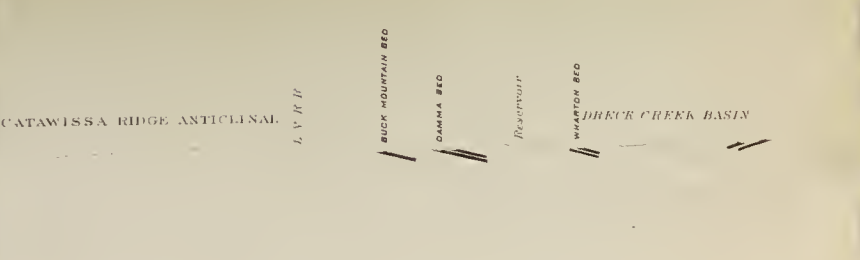
JEANESVILLE AND HONEY BROOK BASINS. SECTION No. 41, ON MINE SHEET No. VII, THROUGH THE WEST END OF THE BEAVER MEADOW PROPERTY (COKE BROS. & CO. LESSEES) ON LINE OF SLOPE No. 7. (TEMPERANCE.)



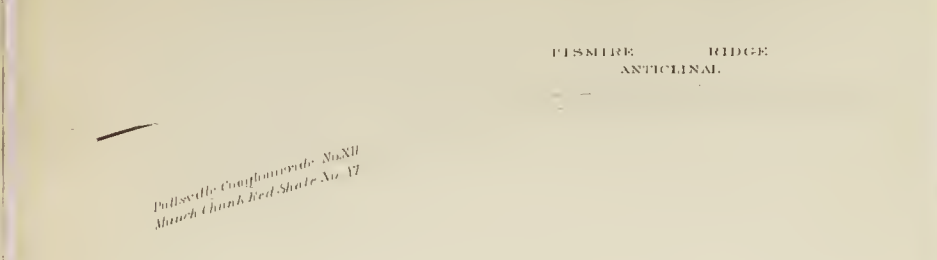
JEANESVILLE AND HONEY BROOK BASINS. SECTION No. 42, ON MINE SHEET No. VII, THROUGH THE WEST END OF THE BEAVER MEADOW PROPERTY (COKE BROS. & CO. LESSEES) ON LINE OF SLOPE No. 7. (TEMPERANCE.)



SPRING MOUNTAIN, TRESCROW, JEANESVILLE, AND DRECK CREEK BASINS. SECTION No. 40, ON MINE SHEET No. VII, THROUGH THE WEST END OF THE BEAVER MEADOW PROPERTY (COKE BROS. & CO. LESSEES) ON LINE OF SLOPE No. 7. (TEMPERANCE.)



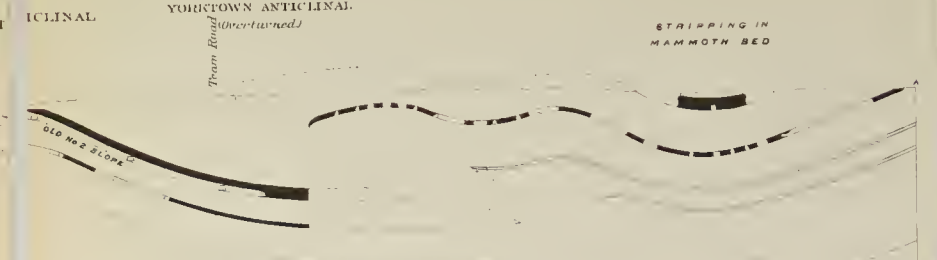
JEANESVILLE AND HONEY BROOK BASINS. SECTION No. 41, ON MINE SHEET No. VII, THROUGH THE WEST END OF THE BEAVER MEADOW PROPERTY (COKE BROS. & CO. LESSEES) ON LINE OF SLOPE No. 7. (TEMPERANCE.)



JEANESVILLE AND HONEY BROOK BASINS. SECTION No. 42, ON MINE SHEET No. VII, THROUGH THE WEST END OF THE BEAVER MEADOW PROPERTY (COKE BROS. & CO. LESSEES) ON LINE OF SLOPE No. 7. (TEMPERANCE.)



JEANESVILLE AND HONEY BROOK BASINS. SECTION No. 43, ON MINE SHEET No. VII, THROUGH THE WEST END OF THE BEAVER MEADOW PROPERTY (COKE BROS. & CO. LESSEES) ON LINE OF SLOPE No. 7. (TEMPERANCE.)



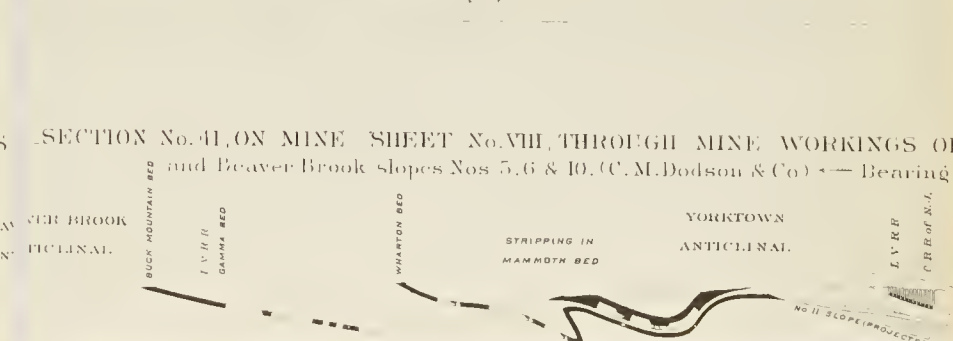
SKETCH MAP OF MINE SHEETS Nos. II AND VII, AND PART OF Nos. X AND XI, SHOWING THE POSITION OF THE CROSS SECTIONS ON SHEET V. Scale 1 inch to 1 mile.



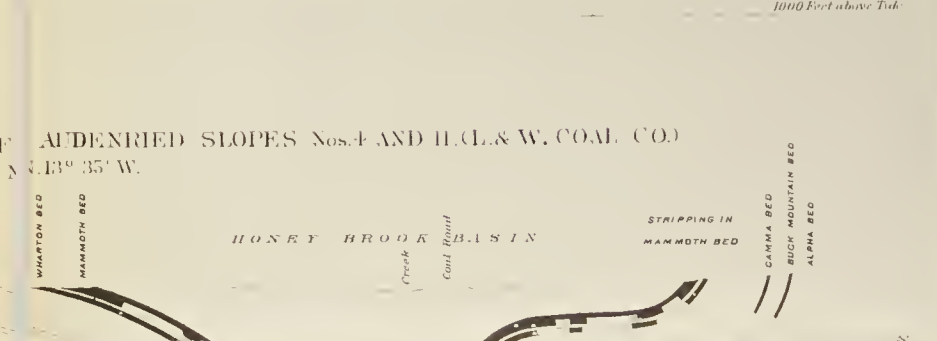
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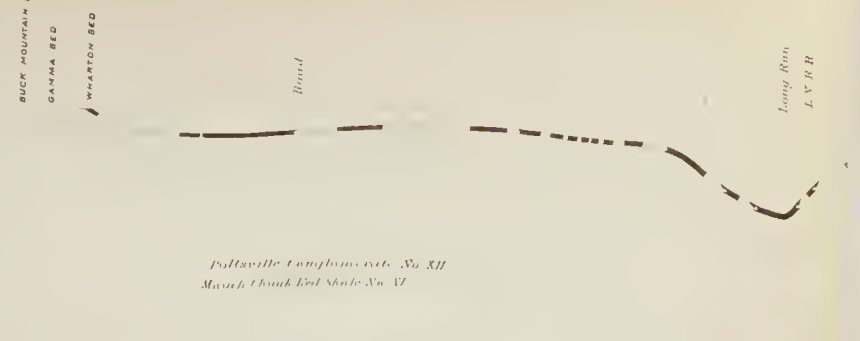
JEANESVILLE AND HONEY BROOK BASINS. SECTION No. 45, ON MINE SHEET No. VII, THROUGH THE WEST END OF THE BEAVER MEADOW PROPERTY (COKE BROS. & CO. LESSEES) ON LINE OF SLOPE No. 7. (TEMPERANCE.)



JEANESVILLE AND HONEY BROOK BASINS. SECTION No. 46, ON MINE SHEET No. VII, THROUGH THE WEST END OF THE BEAVER MEADOW PROPERTY (COKE BROS. & CO. LESSEES) ON LINE OF SLOPE No. 7. (TEMPERANCE.)



HAZLETON BASIN SECTION No. 45, ON MINE SHEET No. XI, THROUGH THE WEST END OF THE BEAVER MEADOW PROPERTY (COKE BROS. & CO. LESSEES) ON LINE OF SLOPE No. 2. (TEMPERANCE.)



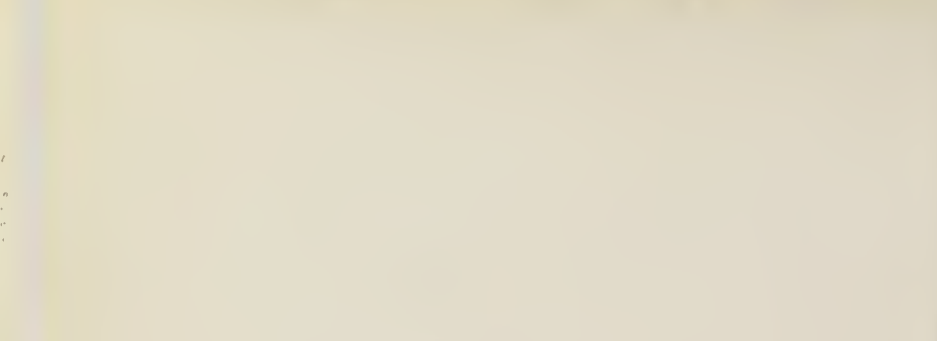
HAZLETON BASIN SECTION No. 46, ON MINE SHEET No. XI, THROUGH THE WEST END OF THE BEAVER MEADOW PROPERTY (COKE BROS. & CO. LESSEES) ON LINE OF SLOPE No. 2. (TEMPERANCE.)



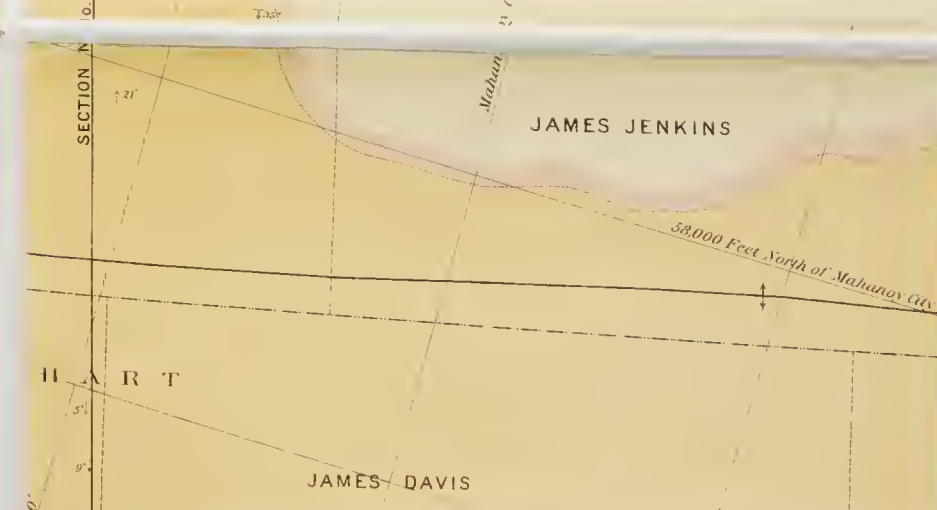
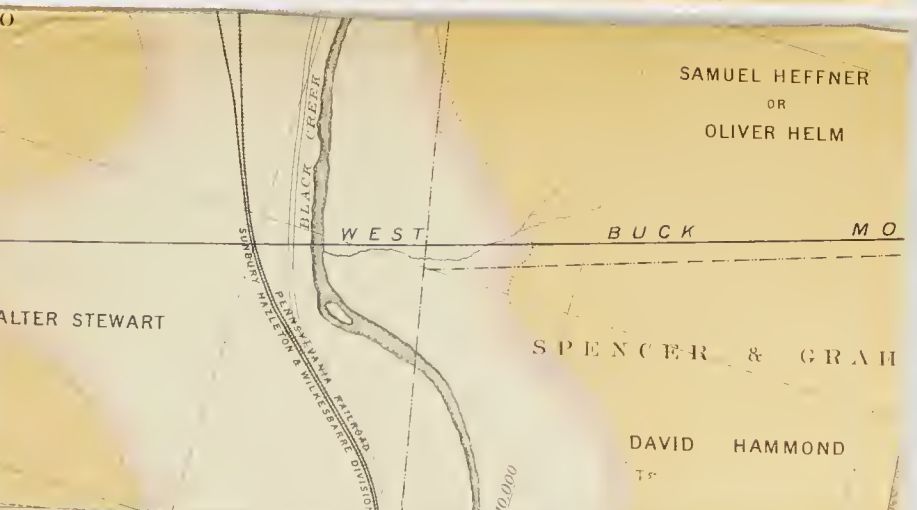
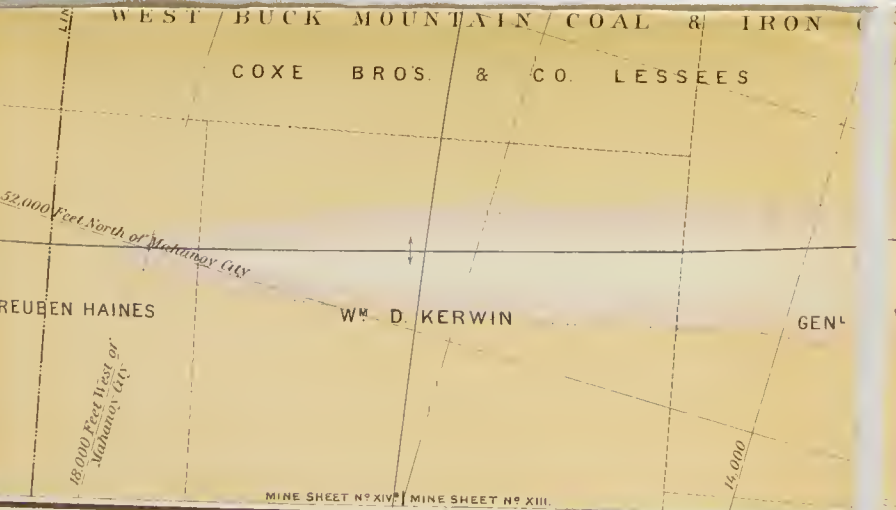
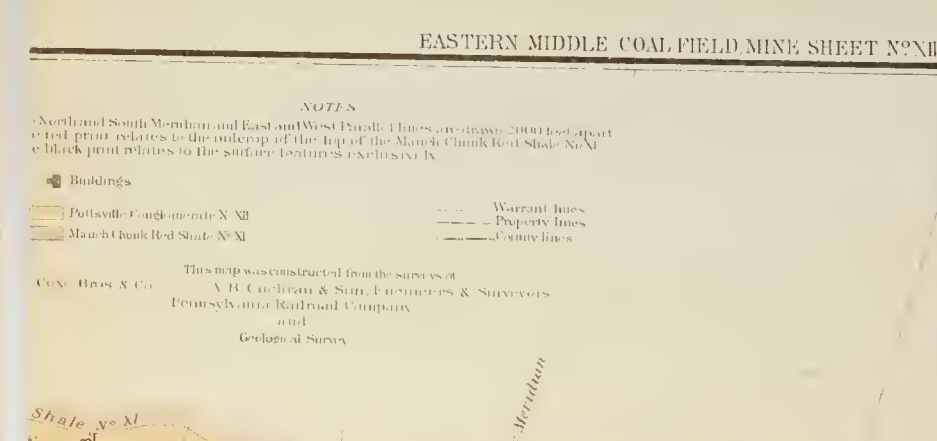
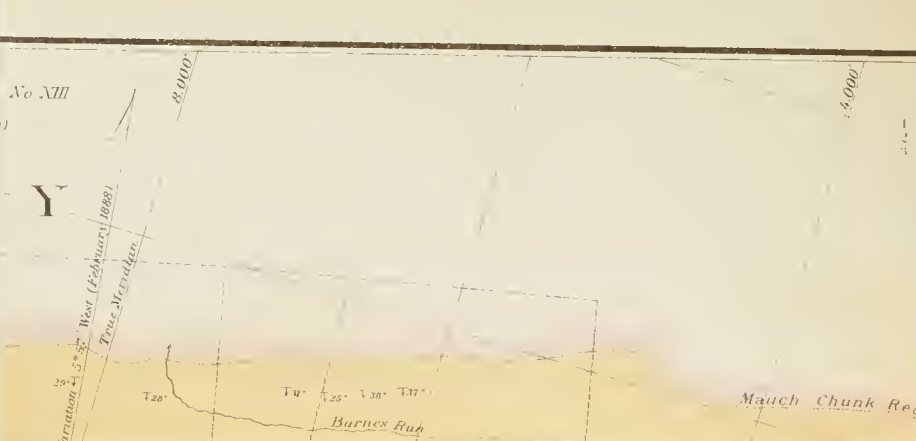
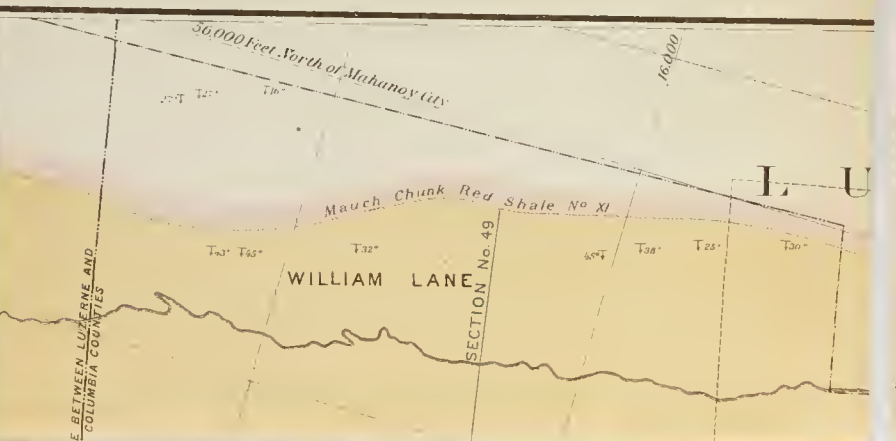
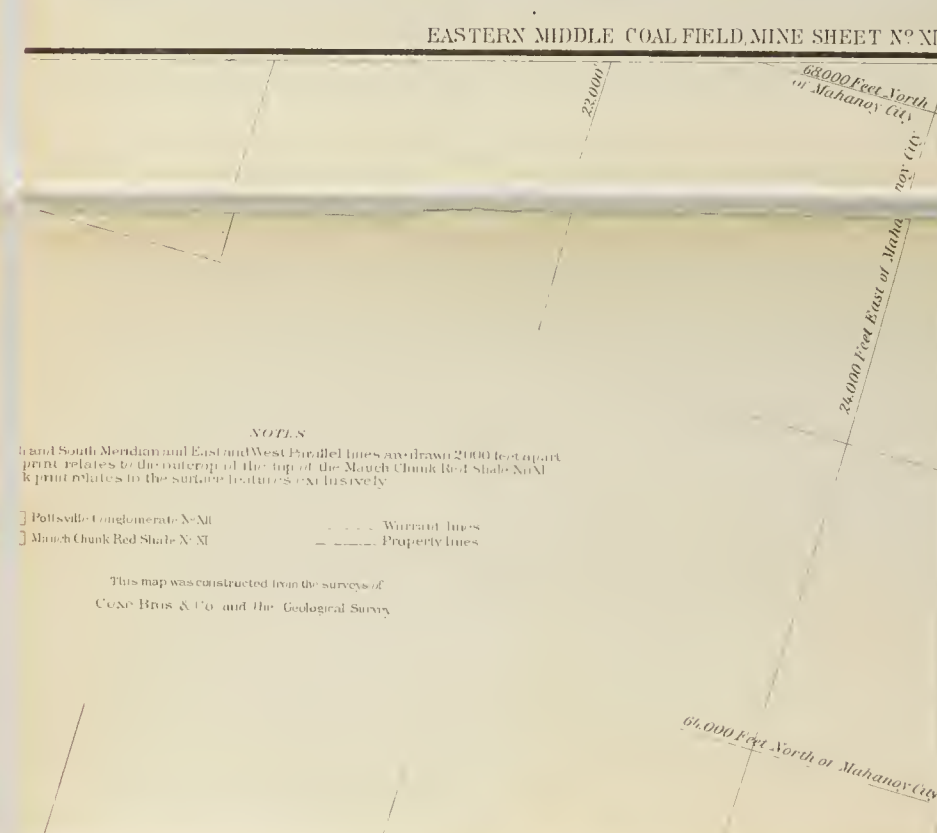
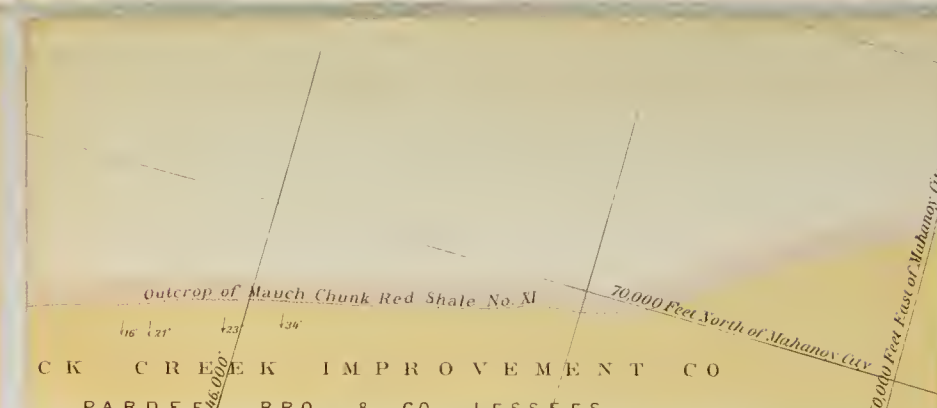
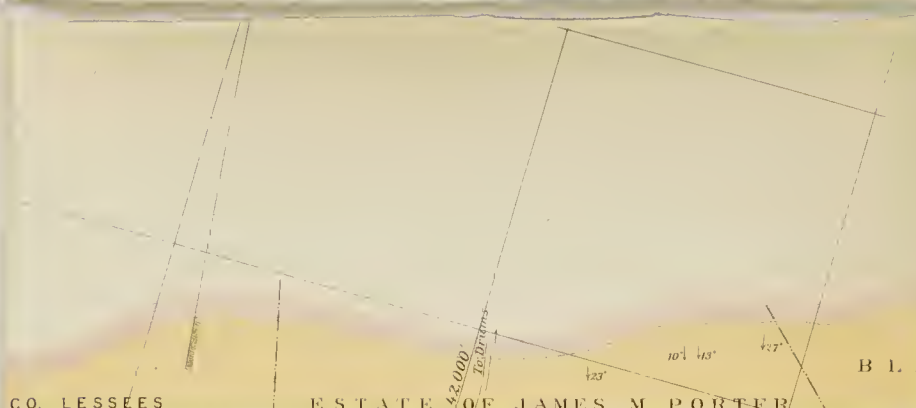
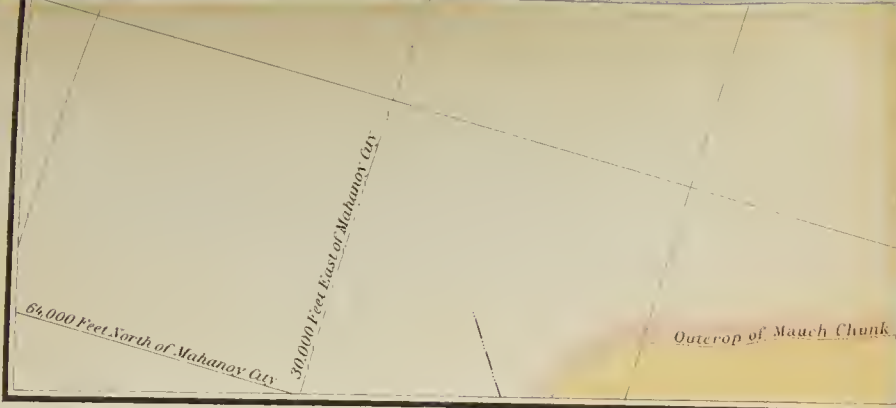
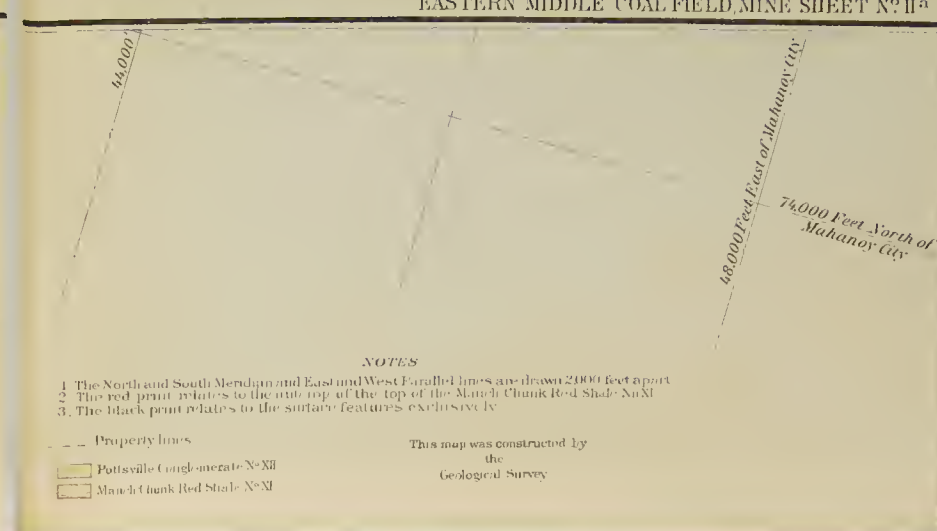
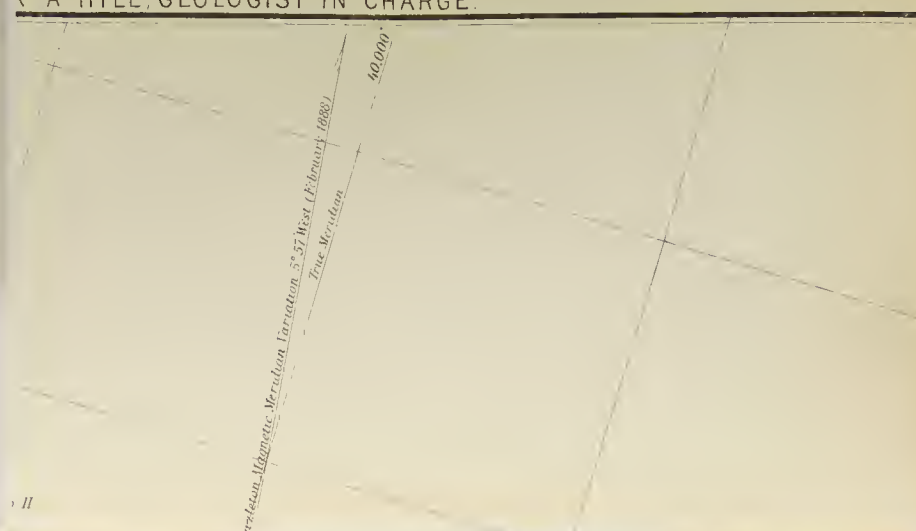
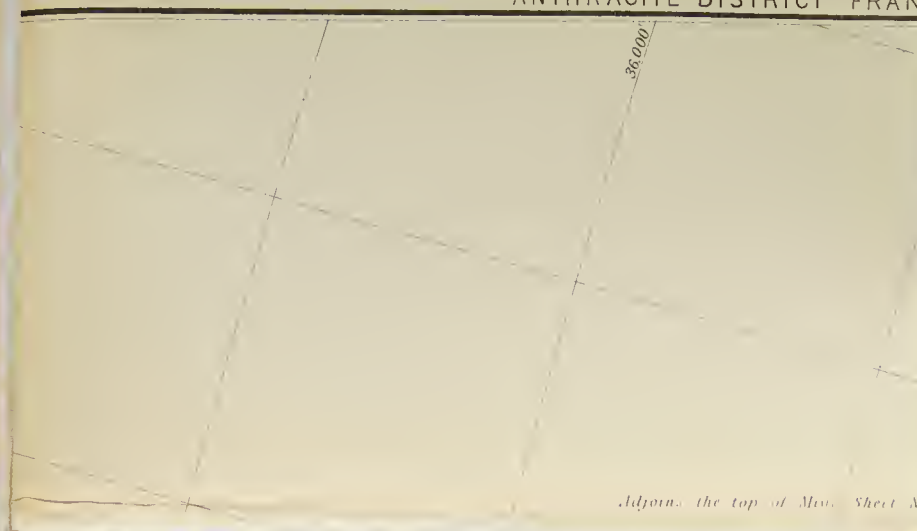
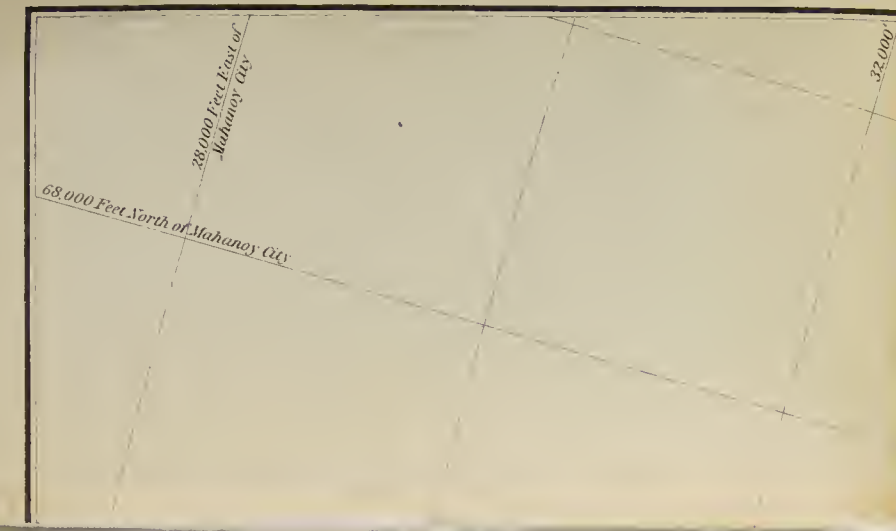
HAZLETON BASIN SECTION No. 47, ON MINE SHEET No. XI, THROUGH THE WEST END OF THE BEAVER MEADOW PROPERTY (COKE BROS. & CO. LESSEES) ON LINE OF SLOPE No. 2. (TEMPERANCE.)



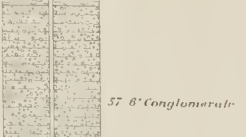
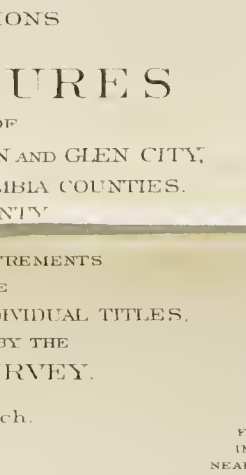
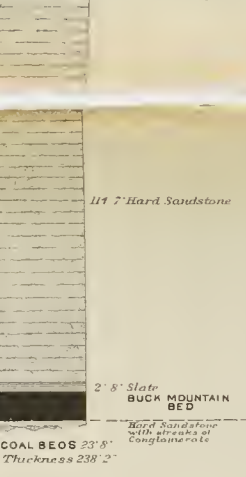
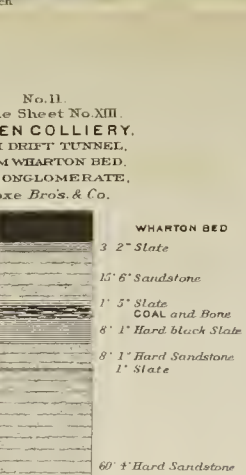
HAZLETON BASIN SECTION No. 48, ON MINE SHEET No. XI, THROUGH THE WEST END OF THE BEAVER MEADOW PROPERTY (COKE BROS. & CO. LESSEES) ON LINE OF SLOPE No. 2. (TEMPERANCE.)



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COLUMNAR SECTIONS
OF THE
COAL MEASURES
IN THE VICINITY OF
TOMHICKEN, DERINGER, GOVERN AND GLEN CITY,
LUZERNE, SCHUYLKILL AND COLUMBIA COUNTIES,
LACKAWANNA COUNTY
CONSTRUCTED FROM MEASUREMENTS
OBTAINED FROM THE
COMPANIES: \$ NAMED IN THE INDIVIDUAL TITLES,
AND FROM THOSE MADE BY THE
GEOLOGICAL SURVEY.

Scale 40 feet to 1 inch

No. 25.
Mine Sheet No. XIV
GLEN CITY COLLIERY,
LOSEE'S TUNNEL,
FROM BUCK MOUNTAIN BED
IN BASIN TO TUNNEL MOUTH
NEAR BOTTOM OF CONGLOMERATE

R.H. Meagley & Co. BUCK MOUNTAIN
 20' 2" *Sandstone*
 9' 0" *Sandstone*
 1' 8" *Gravel and*
 28' 4" *Sandstone*
 1' 0" *Siltstone*
 12' 0" *Conglomerate*
 9' 6" *Dark Congl.*
 12' 8" *Conglomerate*
 9' *Siltstone*
 23' 8" *Conglomerate*
 32' 2" *Siltstone*

No. 24
 Mine Sheet No. XV
DIAMOND DRILL BORE HOLE No. 42.
 FALLS RUN BASIN,
 FROM SURFACE,
 TO CONGLOMERATE,
 COPE BREOS & CO

31' 0" Slate 1' 5" Silt clay 23' 9" Gray Sandstone 29' 0" Conglomerate 98' 130' 5"		21' 0" Conglomerate 6' 6" Sandstone 21' 6" Sandstone 25' 1" Conglomerate 3" Slate 8' 4" Conglomerate 3" Slate 23' 4" Conglomerate 57' 8" Conglomerate
--	--	---

Total COAL BEDS 4
 Total Thickness 211' 5"

REFERENCE SURVEY MAPS AND SECTION
EASTERN MIDDLE COAL FIELD (1) MINE, SHEETS Nos. 21, 22,
CROSS SECTION SHEET No.

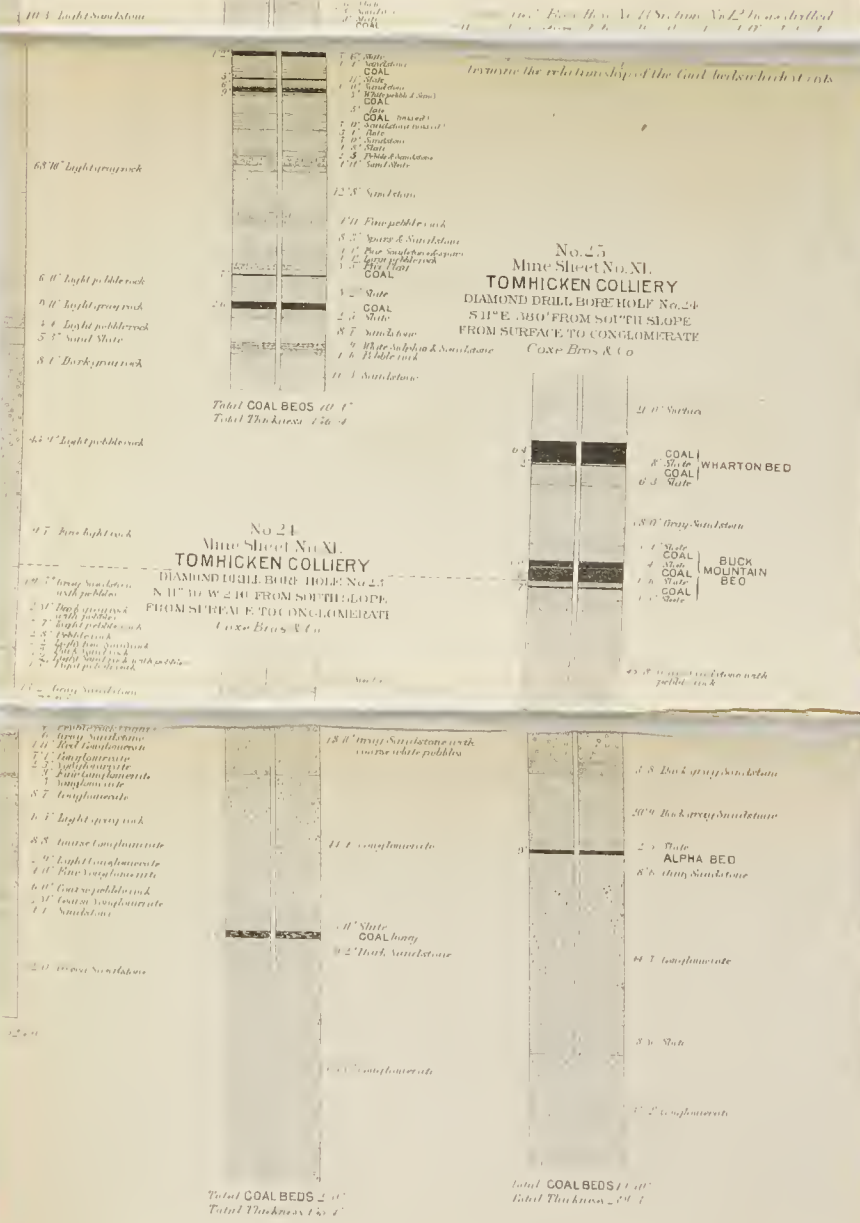
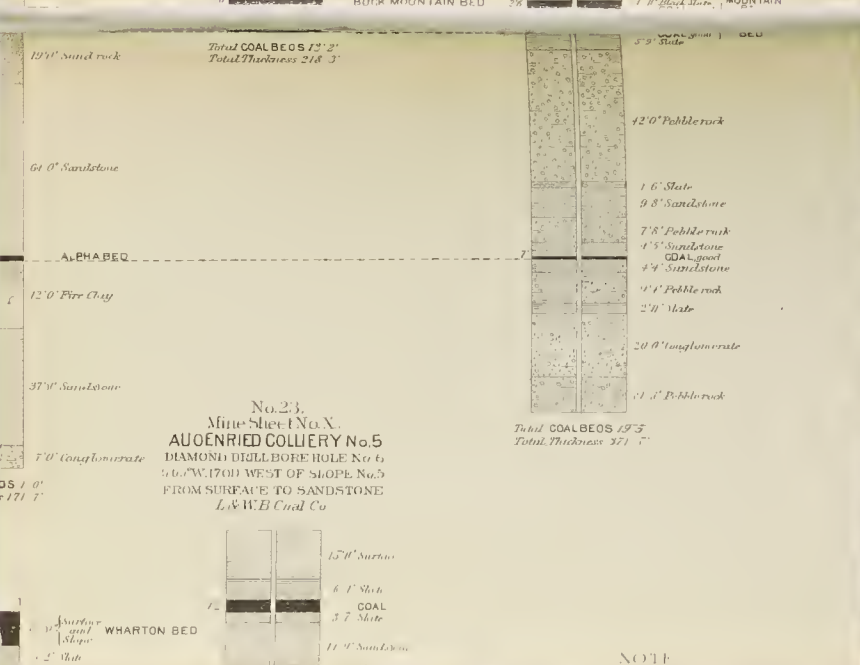
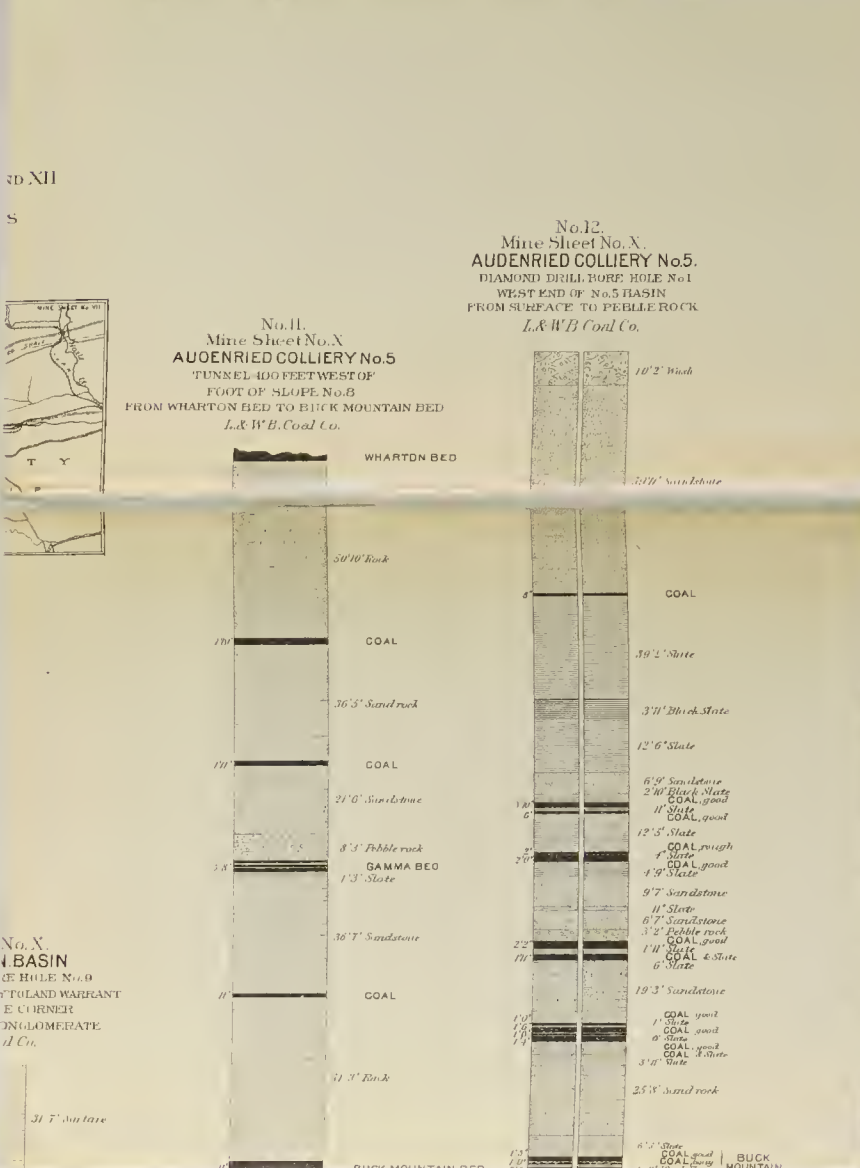
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WESTERN MOBILE AUTOMOBILE REG. - 1948 - 60L. 8201. SHEET 40, 41. 9

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A-1A
V-123
P-123



Scale 40 feet to 1 inch.

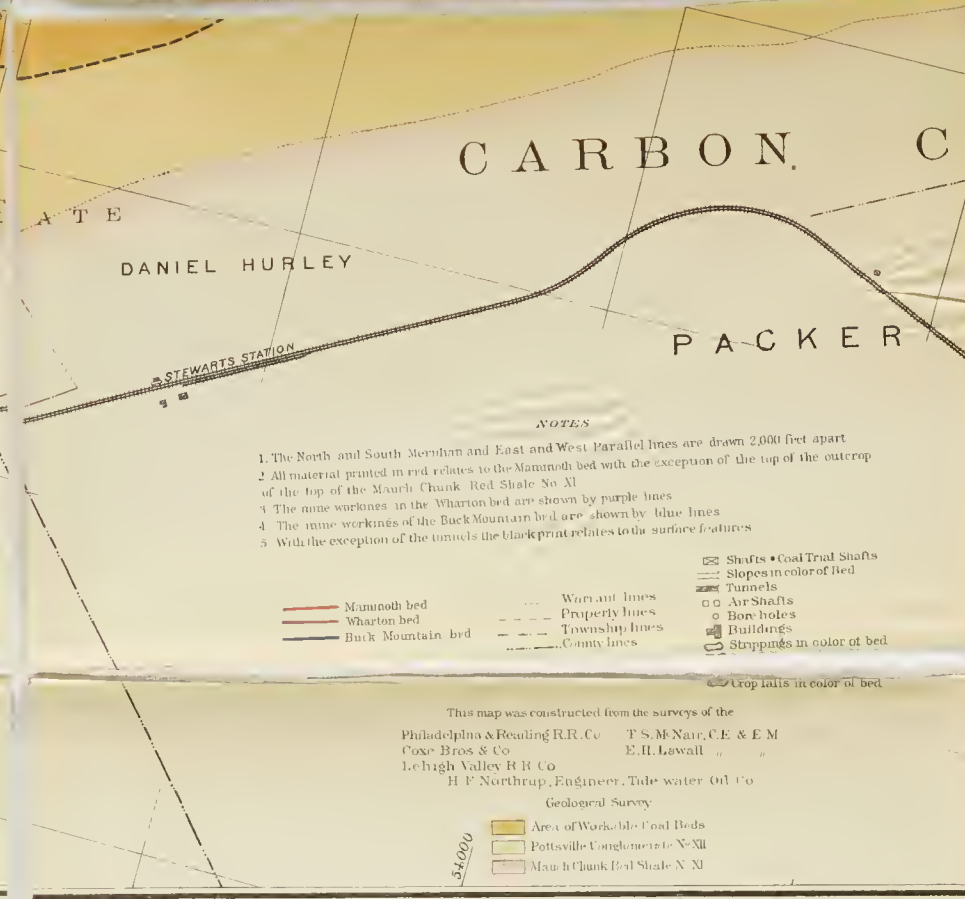
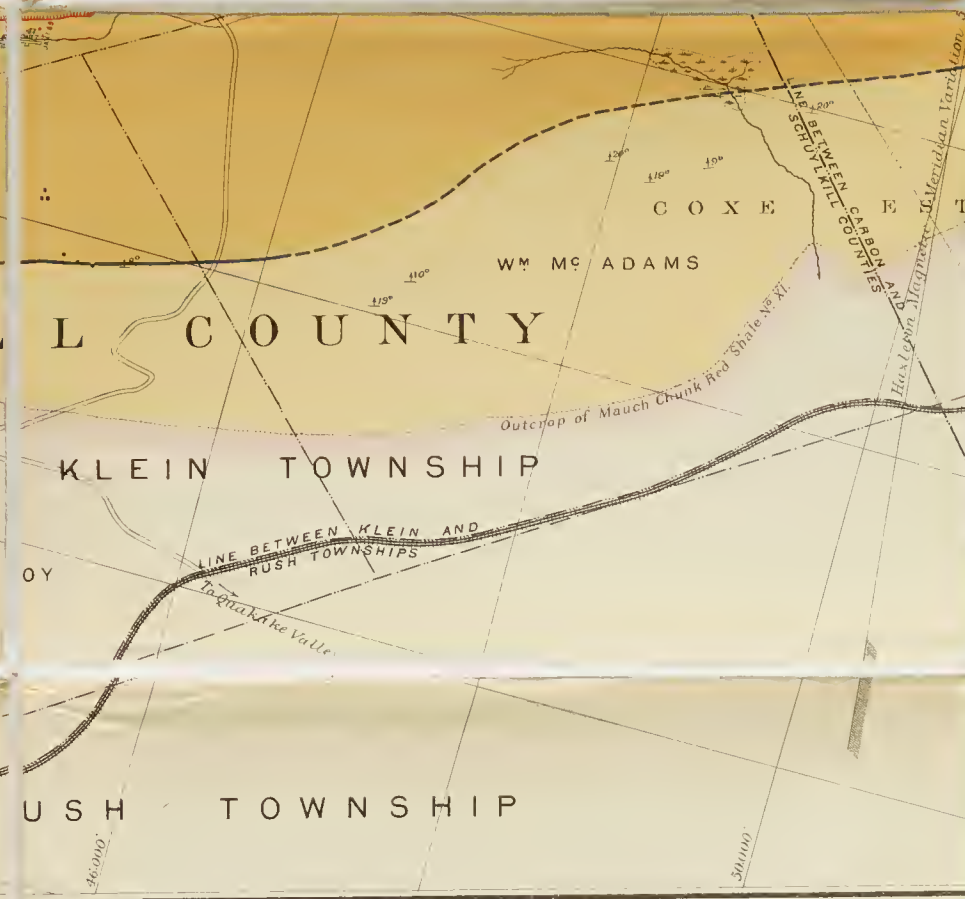
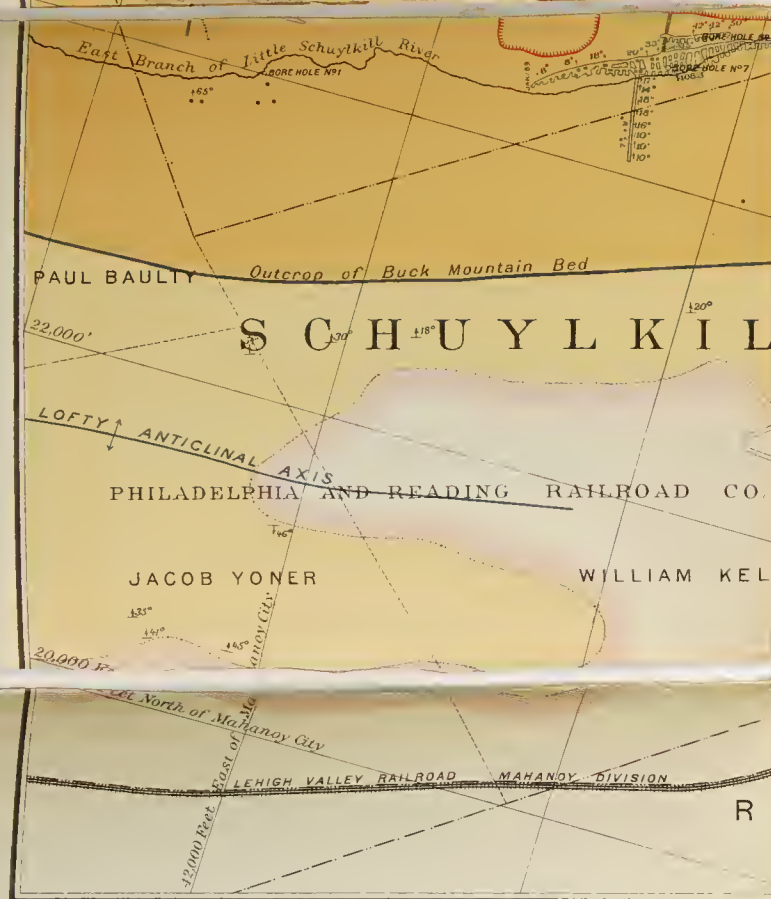
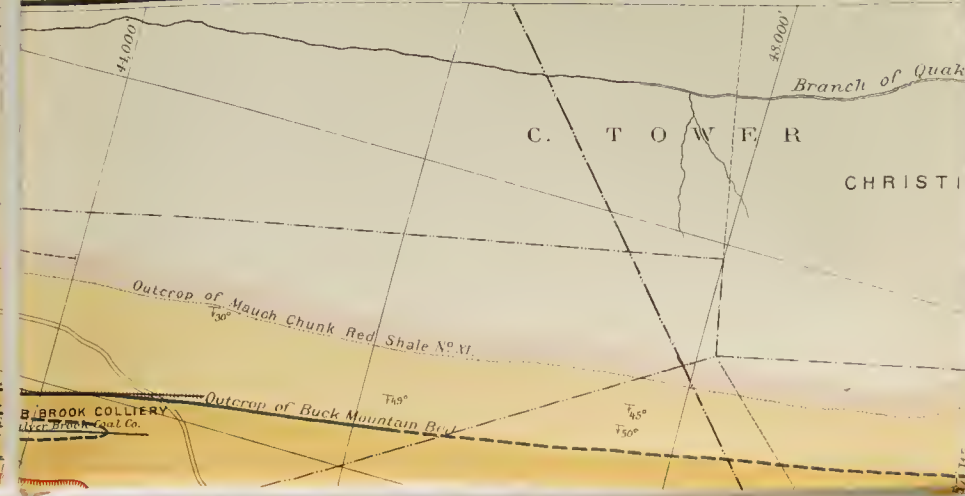
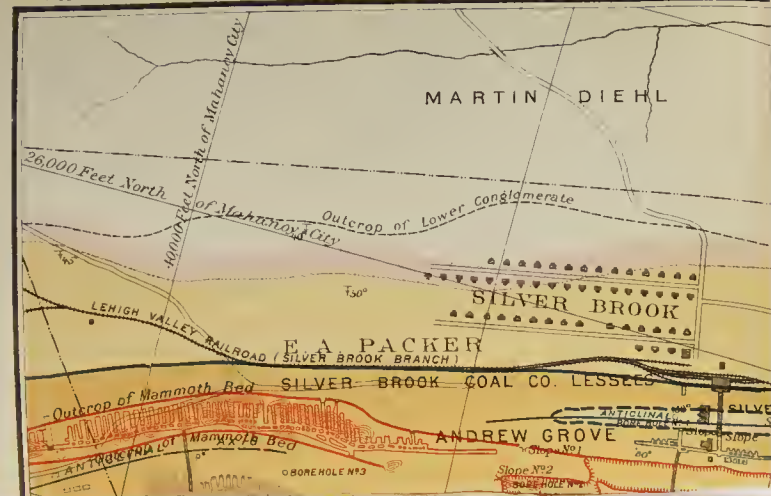
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18

SILVER BROOK BASIN'S CARBON AND SCHUYLKILL COUNTIES



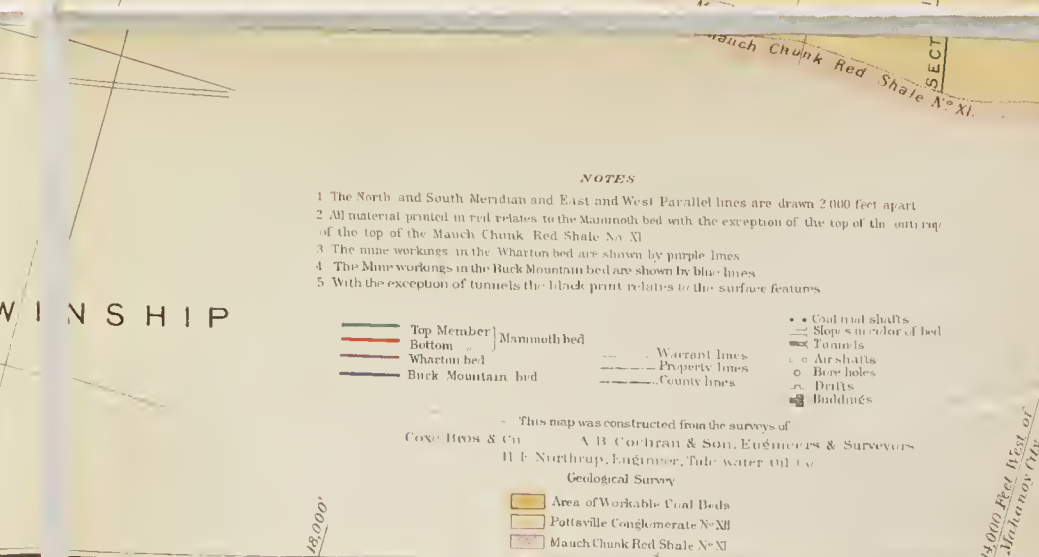
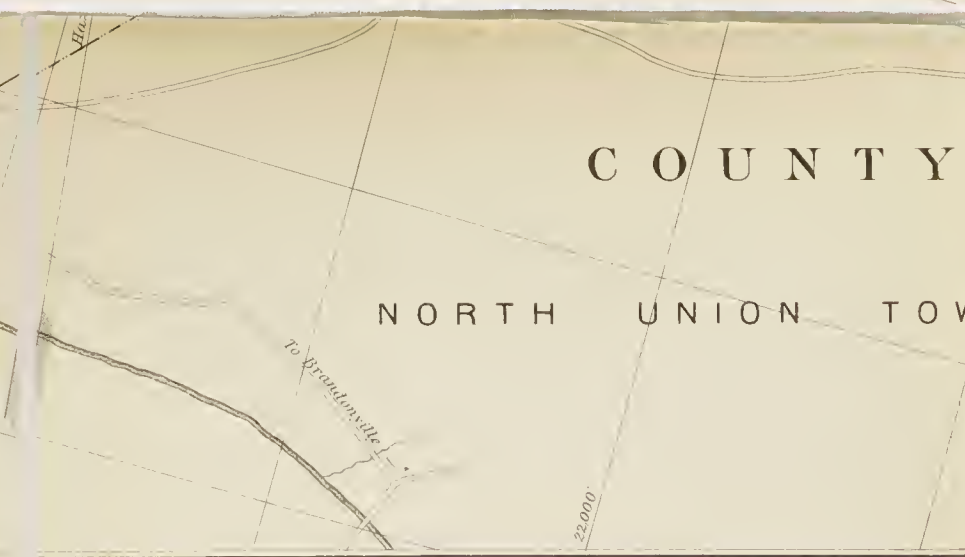
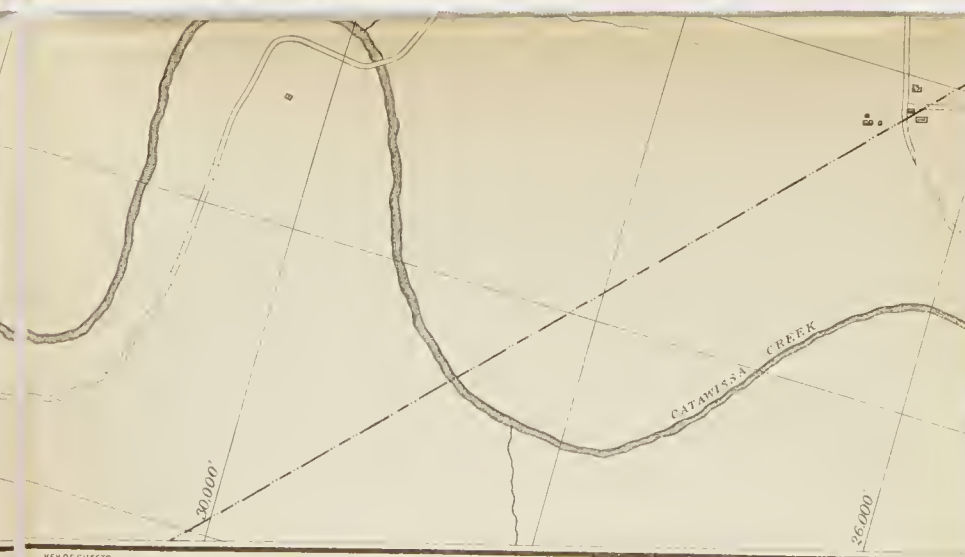
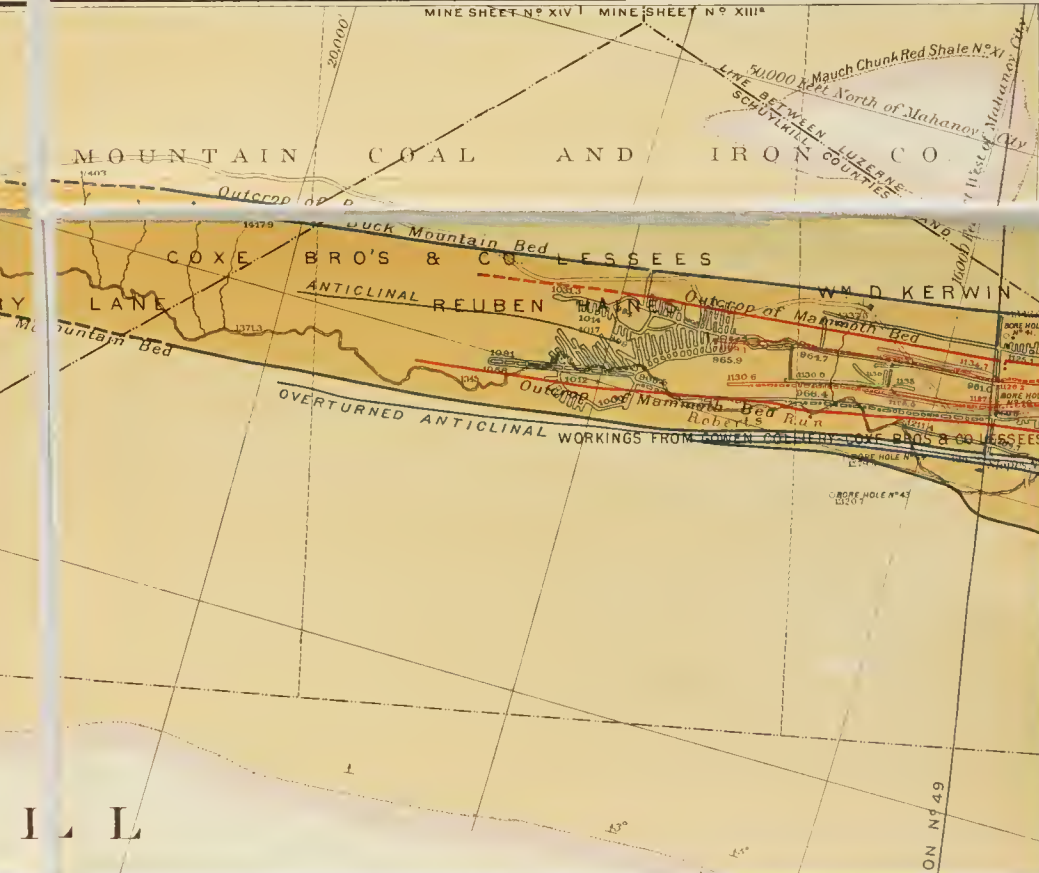
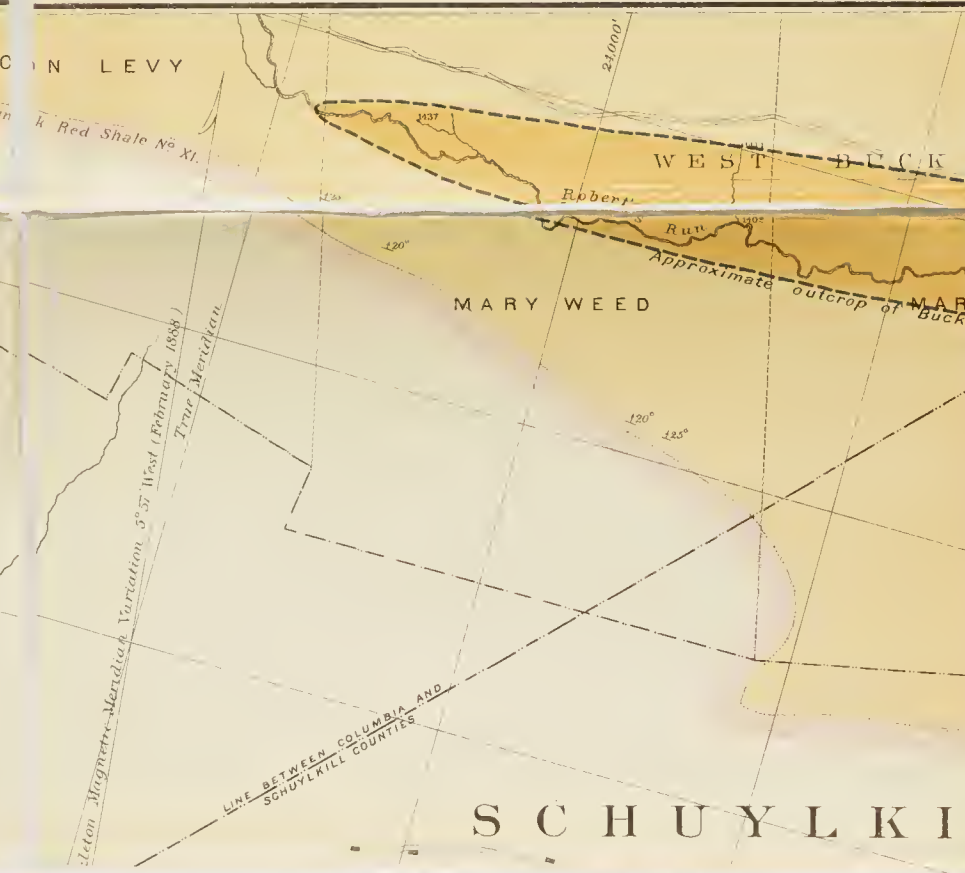
539
ISAAC R. MOISTER, Assistant Geologist
CHARLES JONES, Assistant Geologist
JOHN D. CASHE, Assistant
GEORGE H. BILL, Assistant

KEY OF SHEETS
Scale 1 inch = 1 mile

Scale 1 inch = 1 mile
Latitude Mahanoy City, Centre
Longitude

Scale 1 inch = 1 mile
Latitude Mahanoy City, Centre
Longitude

BLACK CREEK AND ROBERTS RUN BASINS, LUTHER, SCHUYLKILL AND COLUMBIA COUNTIES



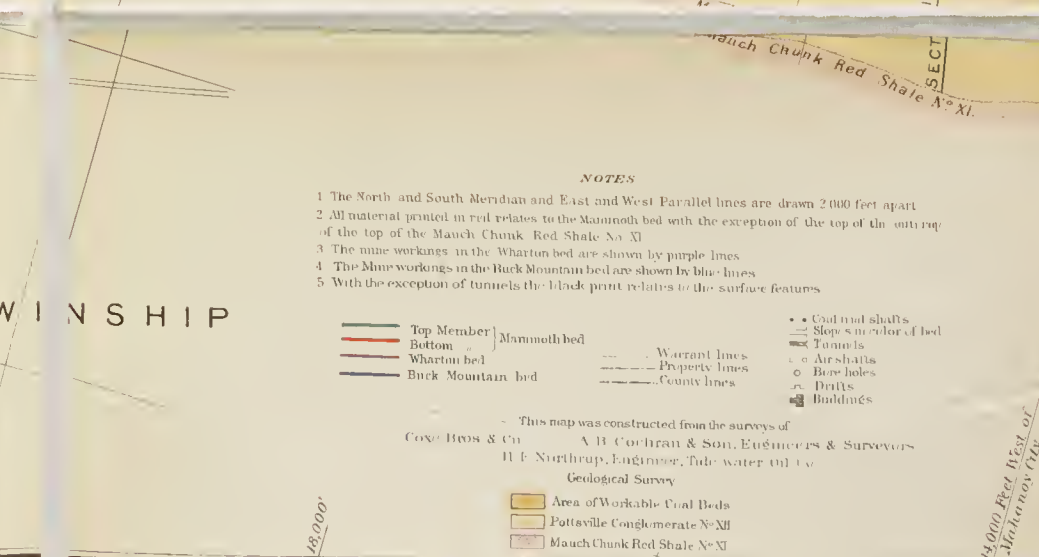
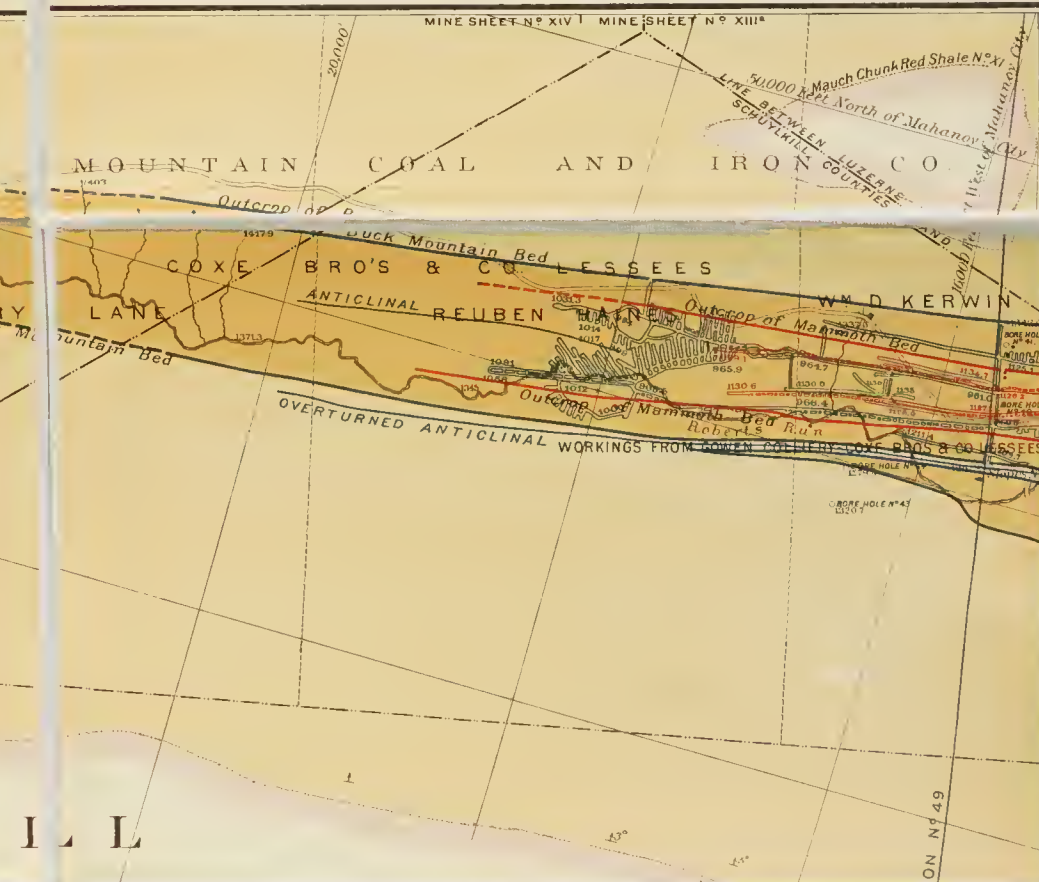
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ISAAC R. MOISTER, Assistant Geologist
CHARLES JONES, Assistant Geologist
JOHN D. CASHE, Assistant
GEORGE H. BILL, Assistant

KEY OF SHEETS
Scale 1 inch = 1 mile

Scale 1 inch = 1 mile
Latitude Mahanoy City, Centre
Longitude

Scale 1 inch = 1 mile
Latitude Mahanoy City, Centre
Longitude

EASTERN MIDDLE COAL FIELD MINE SHEET No. XIV^a

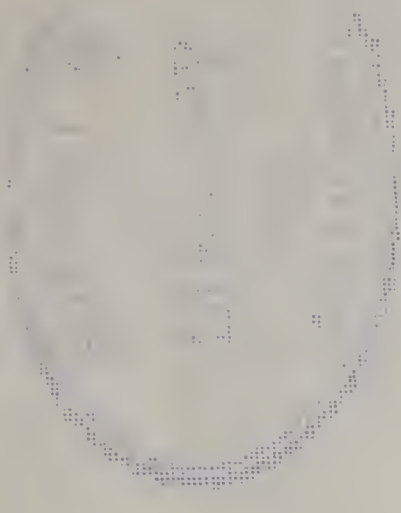


Scale 1 inch = 1 mile
Latitude Mahanoy City, Centre
Longitude

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AA

557
PBB
AA
date 1/17/03
1/17/03
1/17/03



SECTION OF COAL MEASURES
M^o CAULEY MOUNTAIN SHEET
LOSEE'S TUNNEL
GLEN CITY COLLIERY
R. H. MEAGLEY & CO



Scale 100' = 1"



NOTES
1 The North and South Meridian and East and West Tiedline lines are drawn 2000 feet apart.
2 The mine workings in the Buck Mountain bed are shown by blue lines.
3 With the exception of tunnels, the blackprint relates to the surface features.

Legend:
Buck Mountain Bed
Area of Workable Coal Beds
Pottsville-Cardinalite No. XII
Mauch Chunk Red Shale No. XI
Coal Trial Shafts
Shops in color of bed
Air Shafts
Bore holes
Drifts
Buildings
Strippings in color of bed

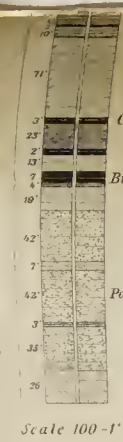
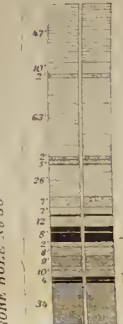
This map was constructed from the surveys of
P. W. Shaffer, Engineer of Mines, U. W. West & Son, Engineers & Surveyors
Coxe Bros & Co., A. H. Cochran
H. T. Northrup, Engineer, Tide water Oil Co.
and
Geological Survey.

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v. 2
GEOLOGY

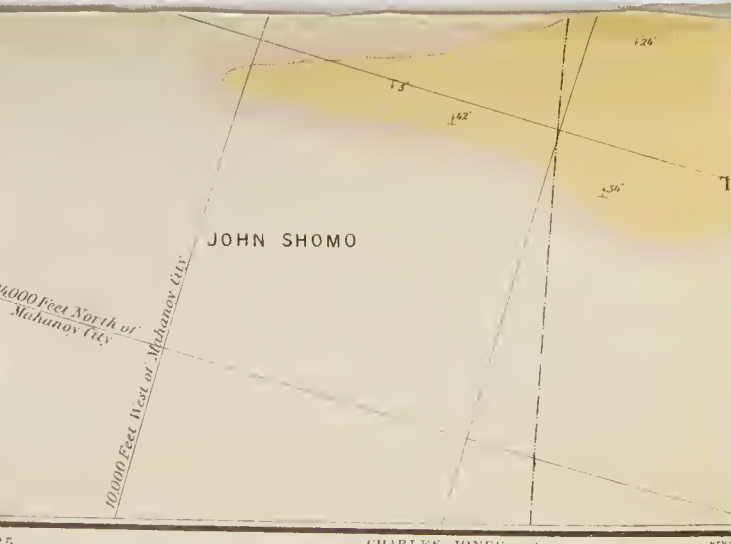
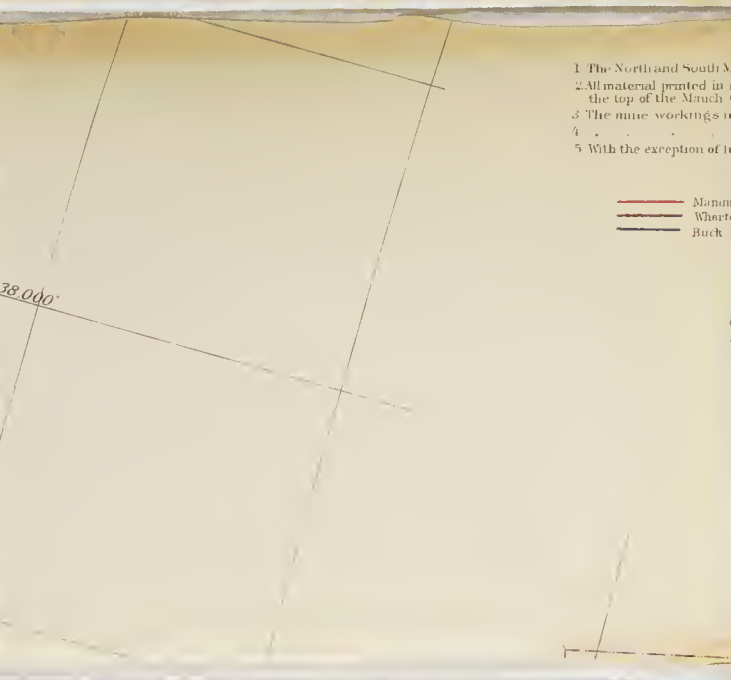
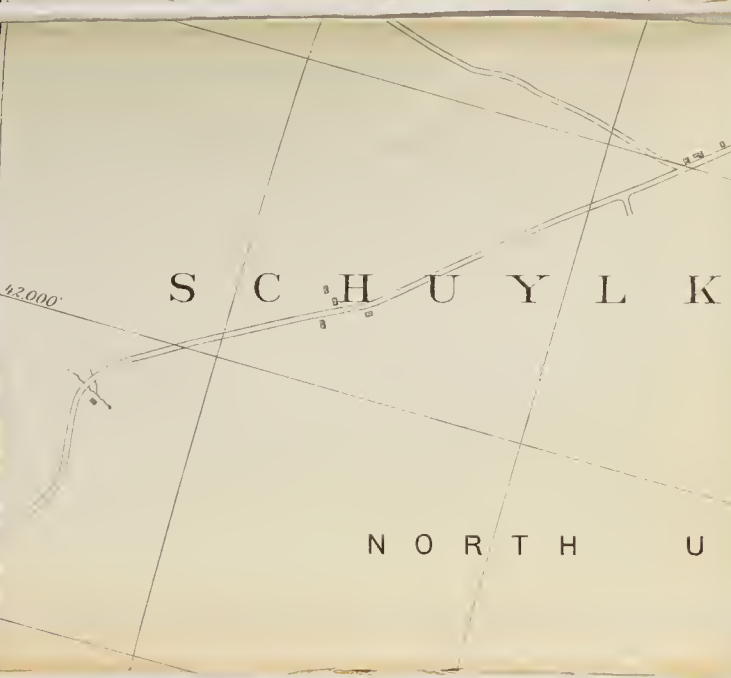
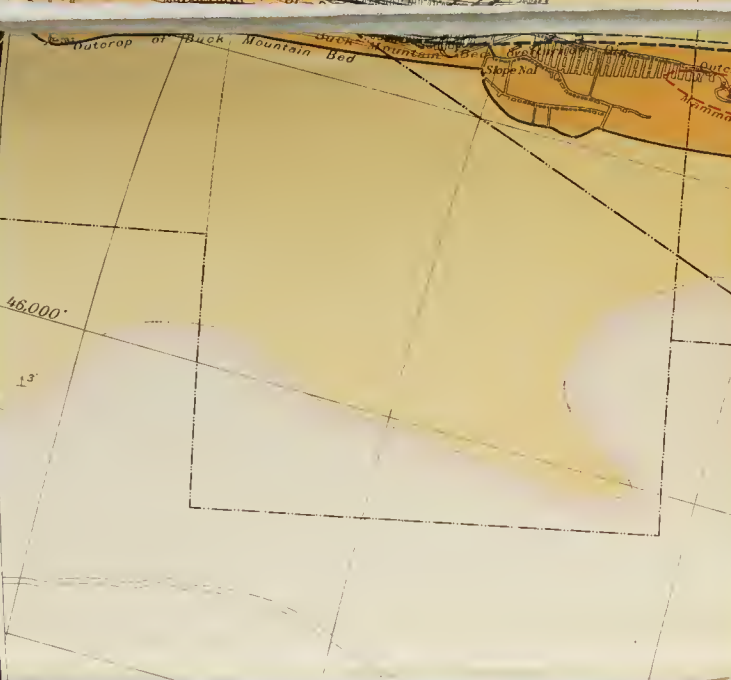
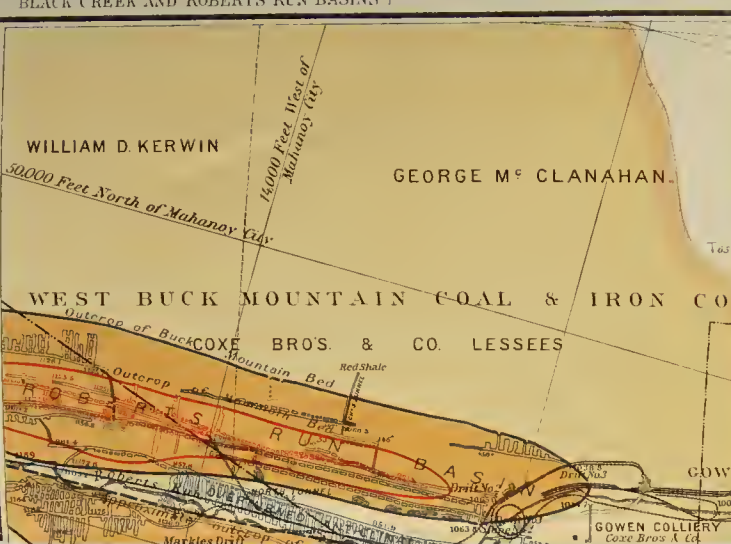
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RESERVED

SECTION OF COAL MEASURES
DERINGER SHEET
BORE HOLES Nos. 30 and 31
DERINGER COLLIERY
COKE BROS. & CO.

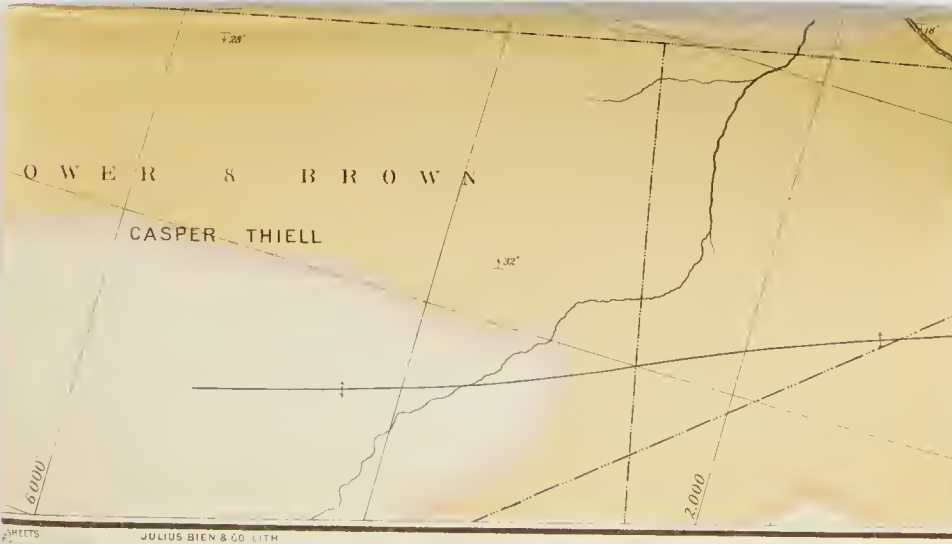
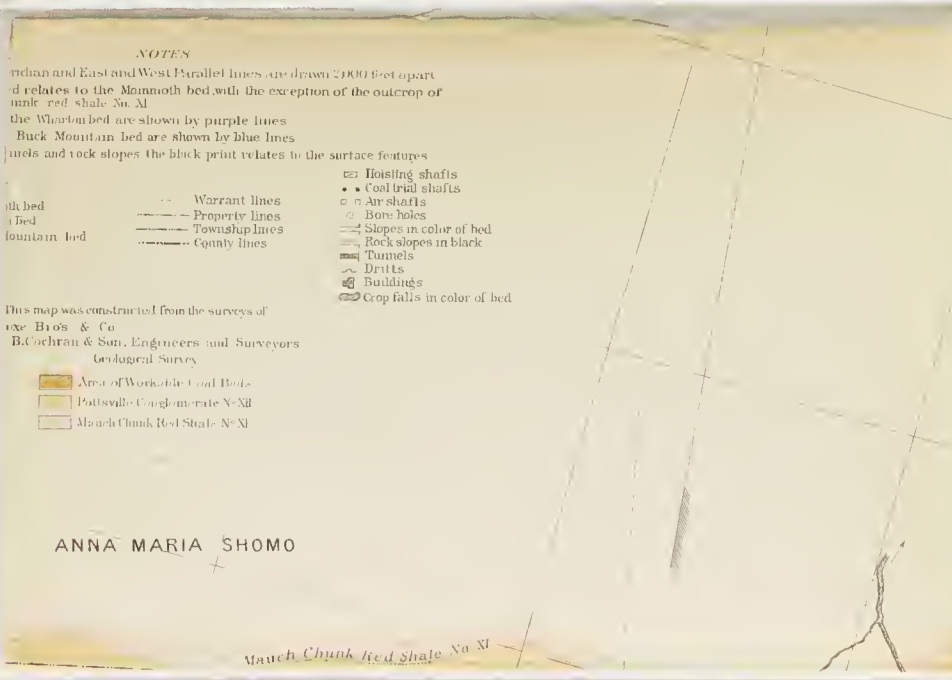


GREEN MOUNTAIN SUGARLOAF MOUNTAIN
BLACK CREEK AND ROBERTS RUN BASINS | LUZERNE AND SCHUYLKILL COUNTIES

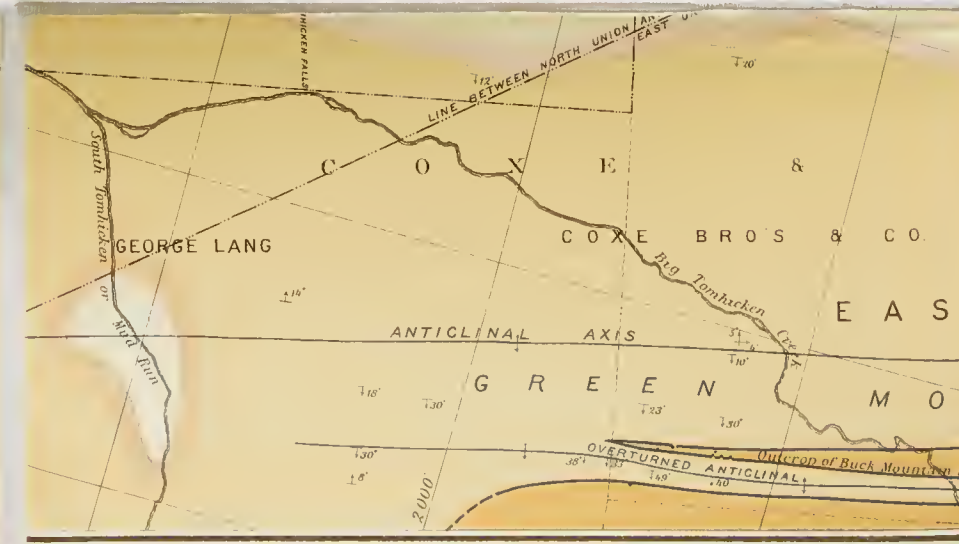
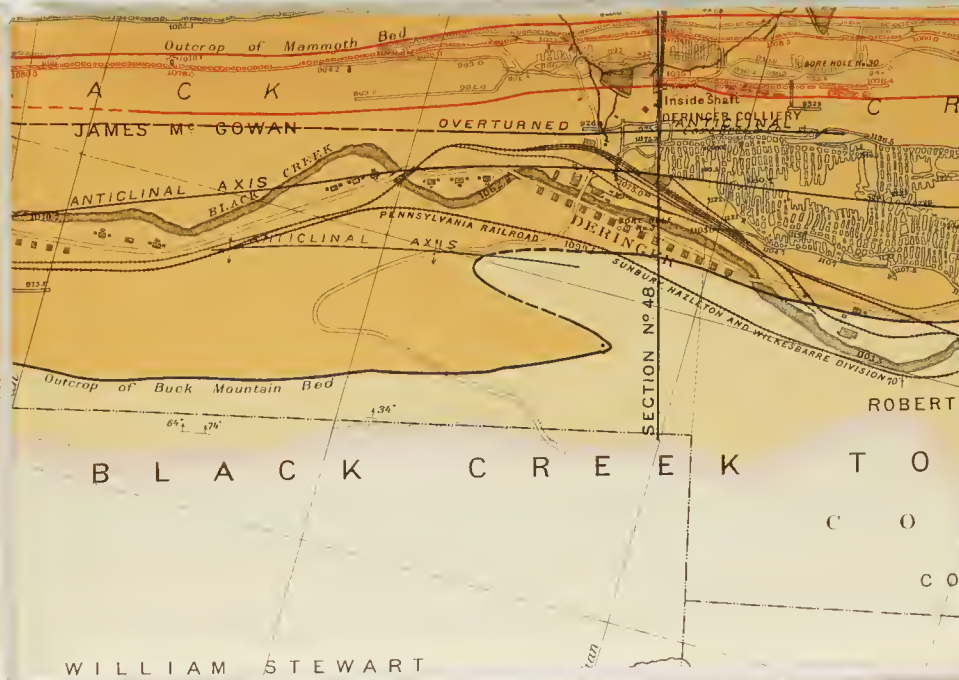
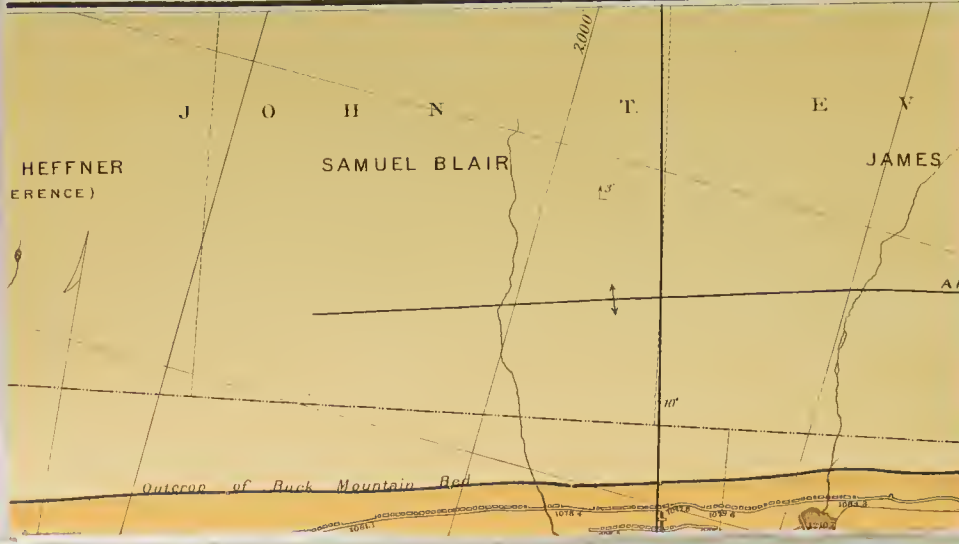


325
ISAAC R. MOISTER, Assistant Geologist
CHARLES JONES
JOHN LUTAN, JR.
GEORGE B. HILL
EDWARD M. KEATING
FRANK SHELLY
G. D. PRICE
Assistants

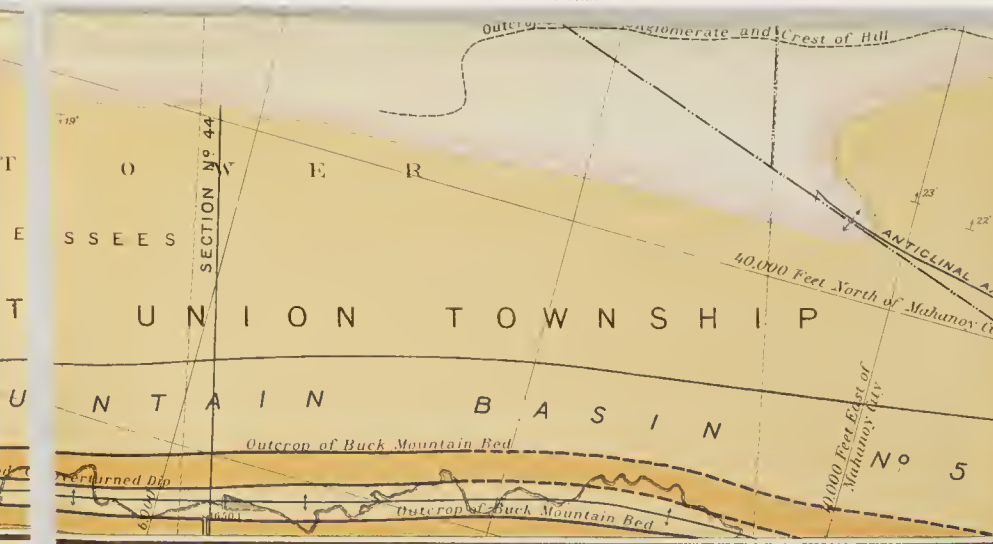
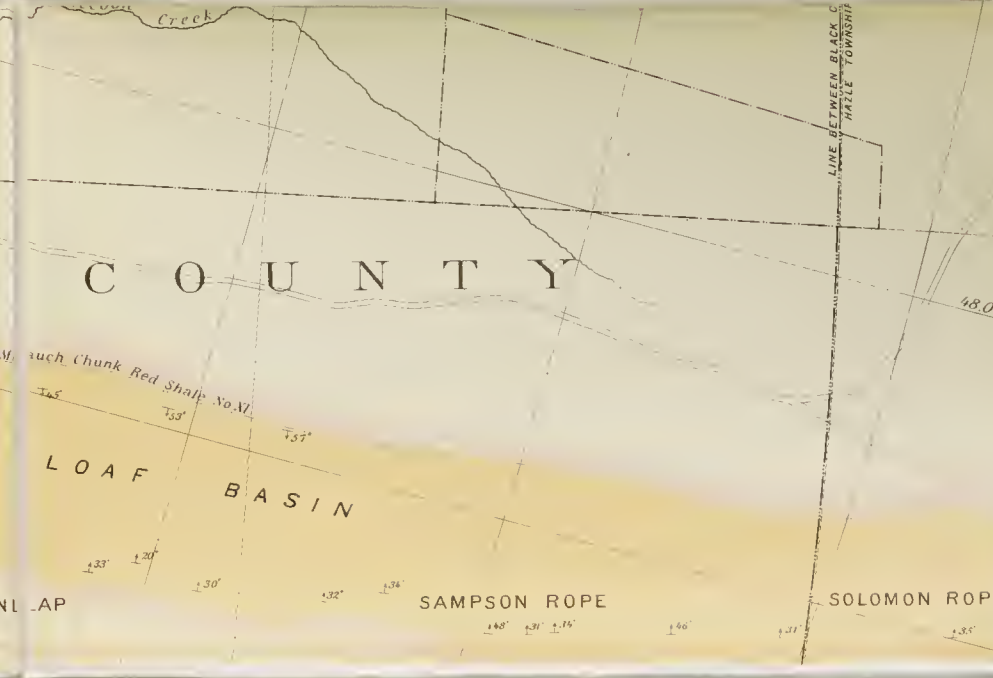
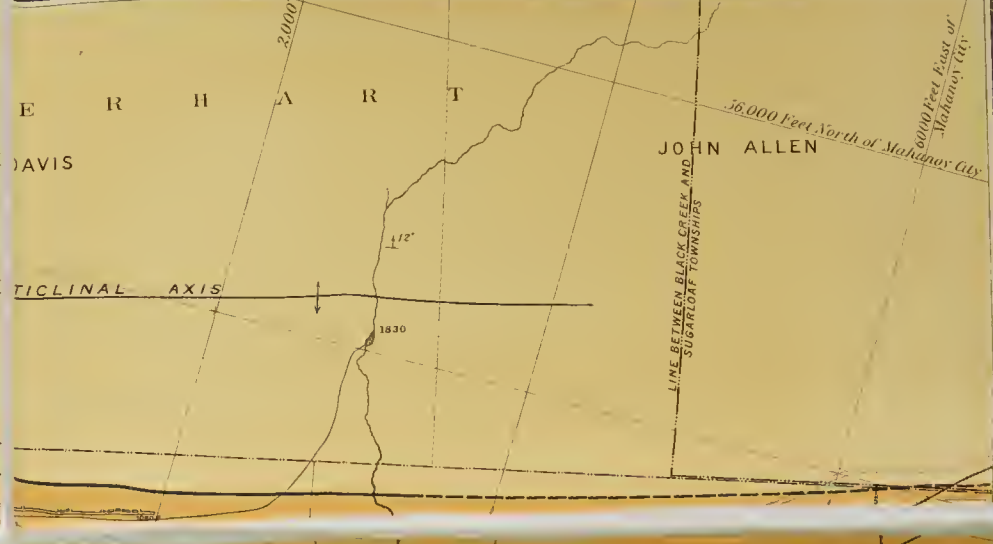
GEOLOGICAL SURVEY OF PENNSYLVANIA, J. P. LESLEY, STATE GEOLOGIST
ANTHRACITE DISTRICT, FRANK A. HILL, GEOLOGIST IN CHARGE



326
JULIUS BIEN & CO. LITH.



327
JULIUS BIEN & CO. LITH.



328
JULIUS BIEN & CO. LITH.

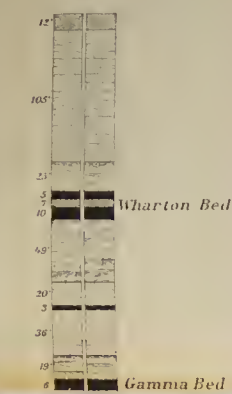
EASTERN MIDDLE COAL FIELD MINE SHEET No. XIII

557
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Atlas
v. 2
p. 3
GEOLOGY

GEOLOGY

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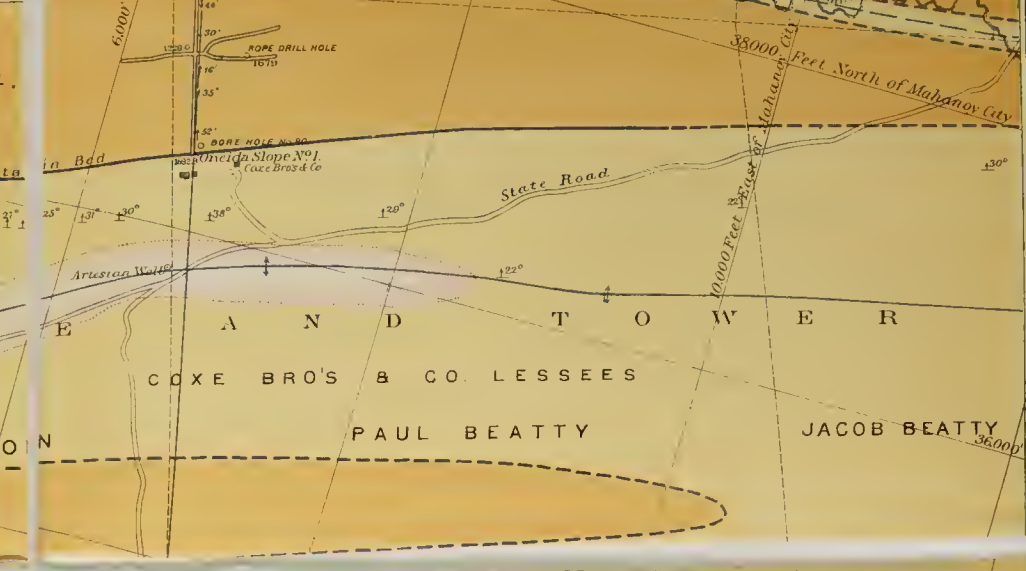
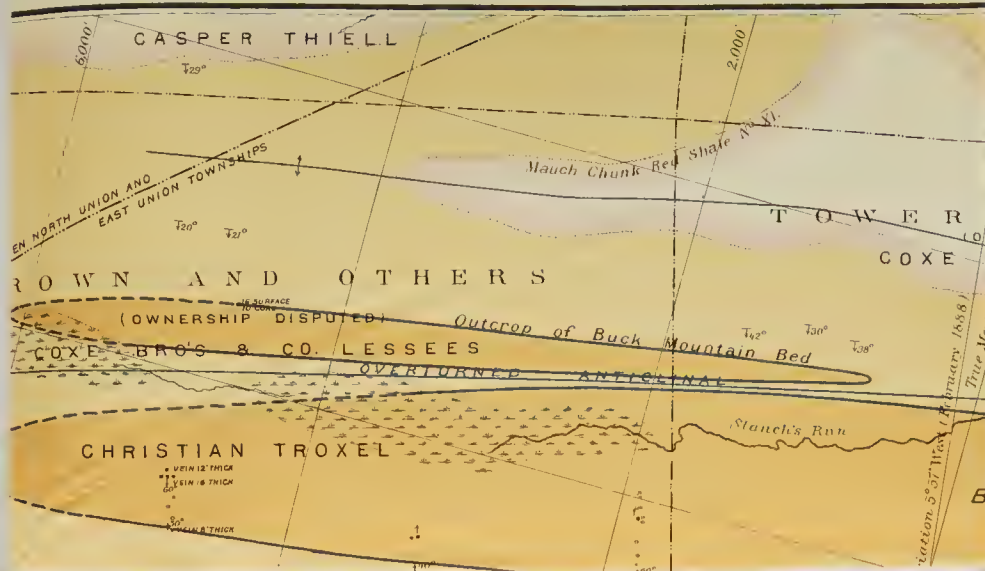
SECTION OF COAL MEASURES
GREEN MOUNTAIN SHEET
ROPE DRILL HOLE
ONEIDA COLLIERY No. 1
COXE BROS. & CO.



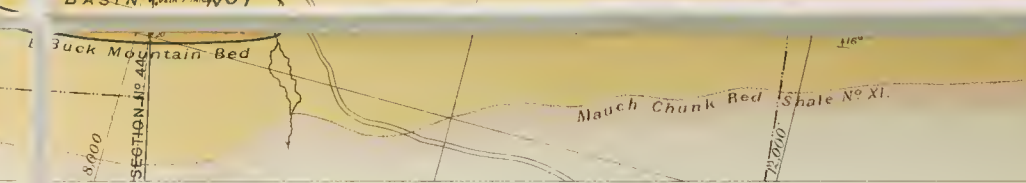
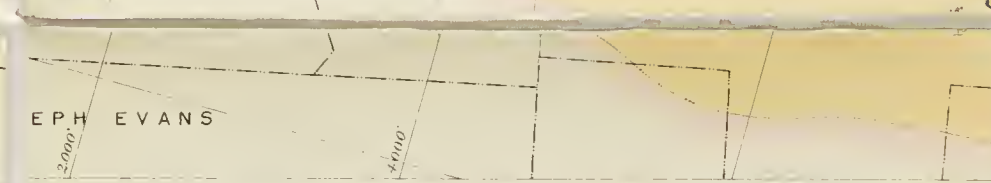
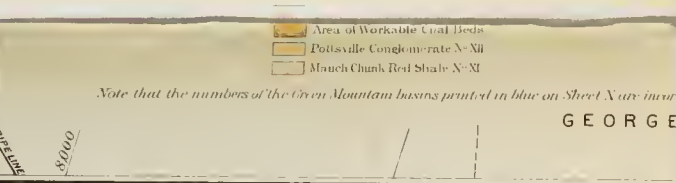
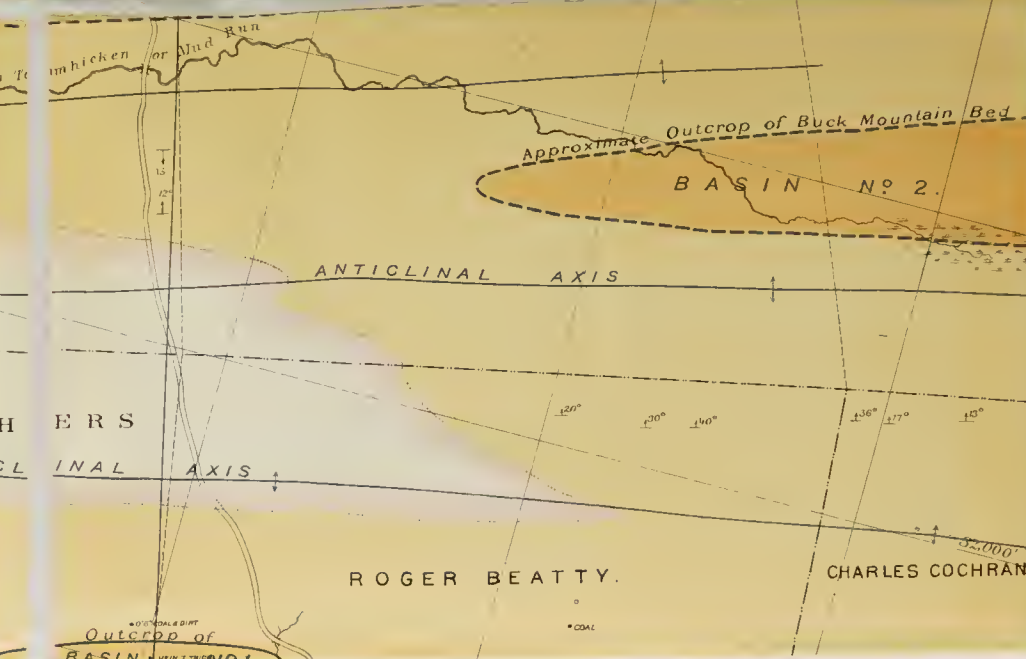
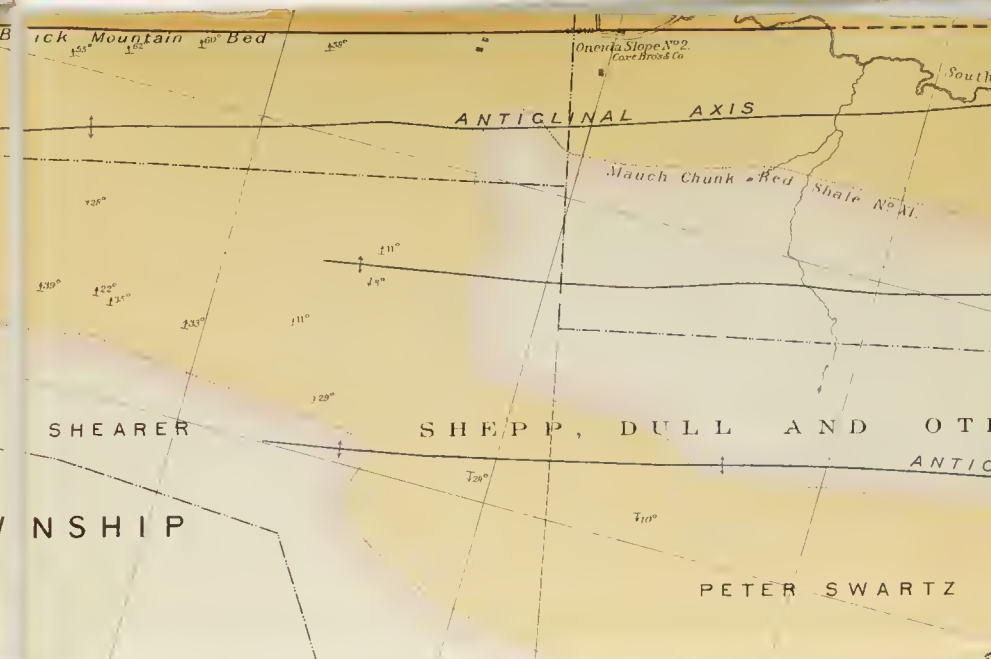
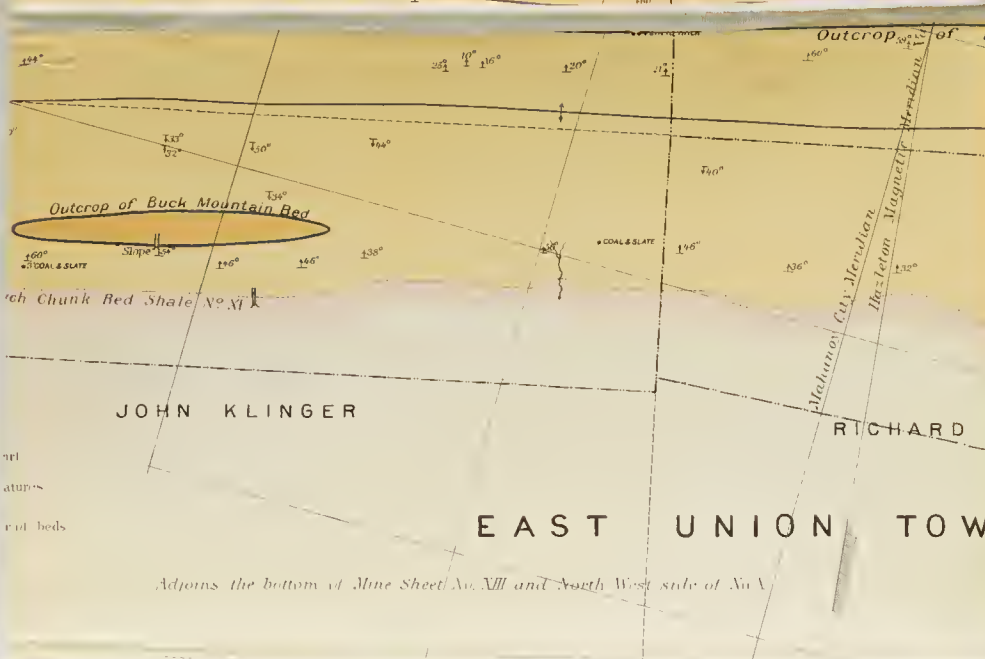
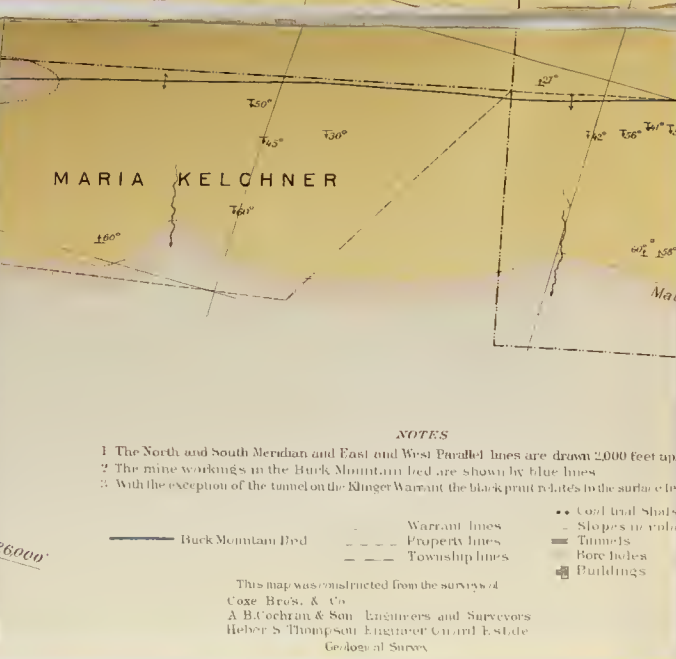
GREEN MOUNTAIN BASINS, SCHUYLKILL COUNTY



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ANTHRACITE DISTRICT, FRANK A. HILL, GEOLOGIST IN CHARGE.



EASTERN MIDDLE COAL FIELD MINE SHEET No. XI



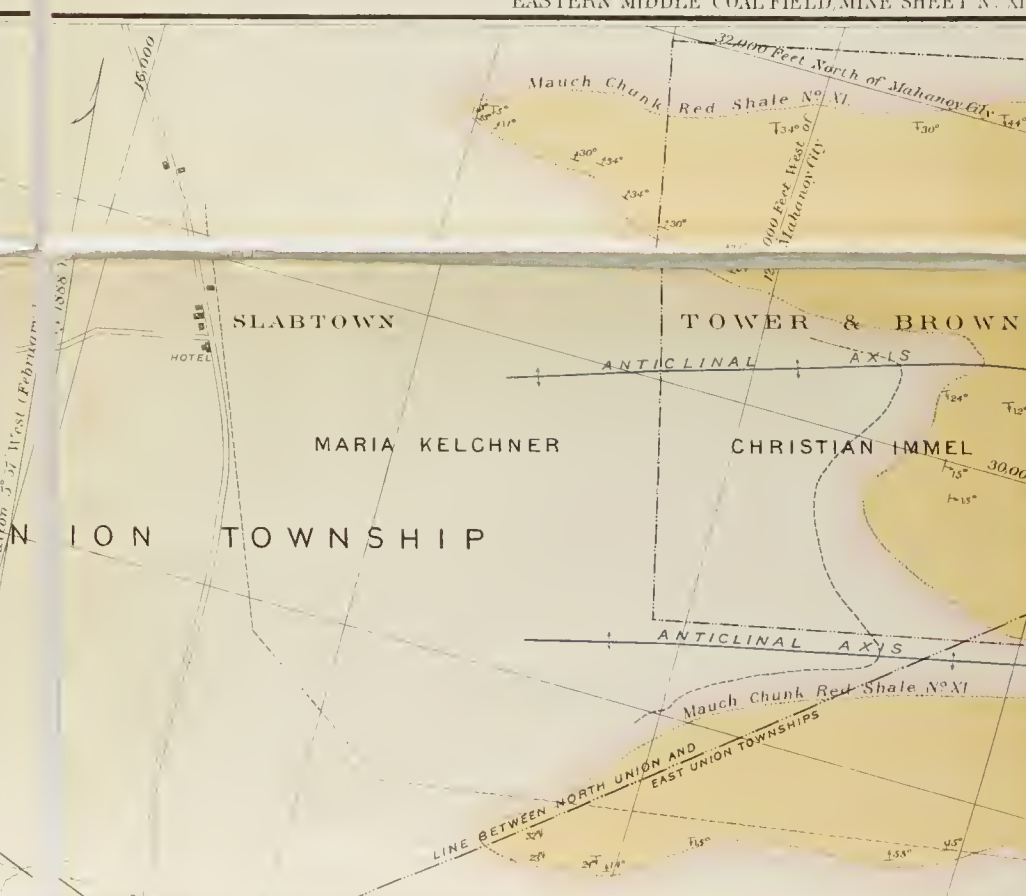
524
ISAAC H. MOISTER, Assistant Geologist
CHARLES JONES, P. W. EMORY, ASSISTANTS
JOHN H. CLARK, JR., GEORGE H. HILL, F. S. LESLEY, L. D. PRICE

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GREEN MOUNTAIN BASINS, SCHUYLKILL COUNTY



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CHARLES JONES, P. W. EMORY, ASSISTANTS
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EASTERN MIDDLE COAL FIELD MINE SHEET No. XII



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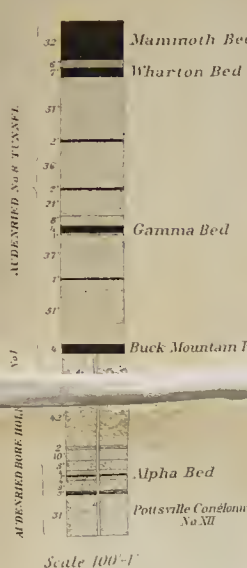
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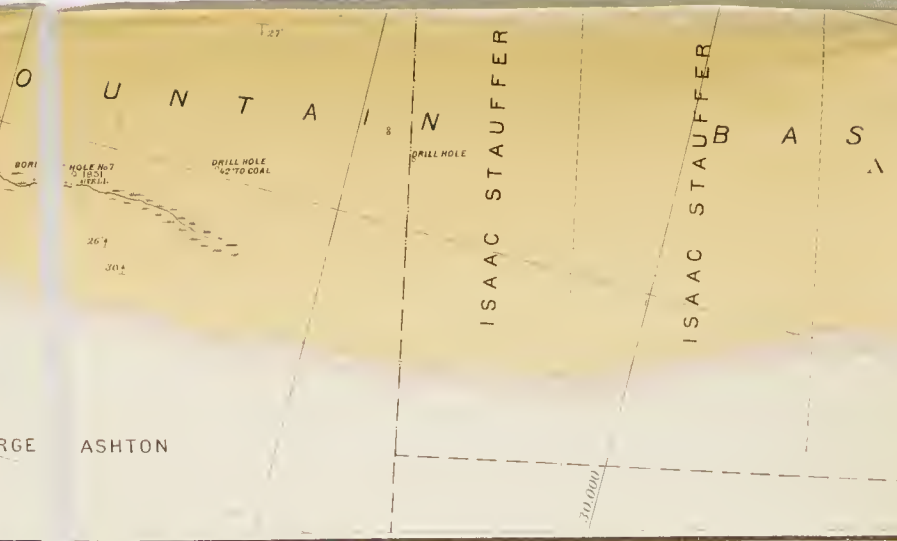
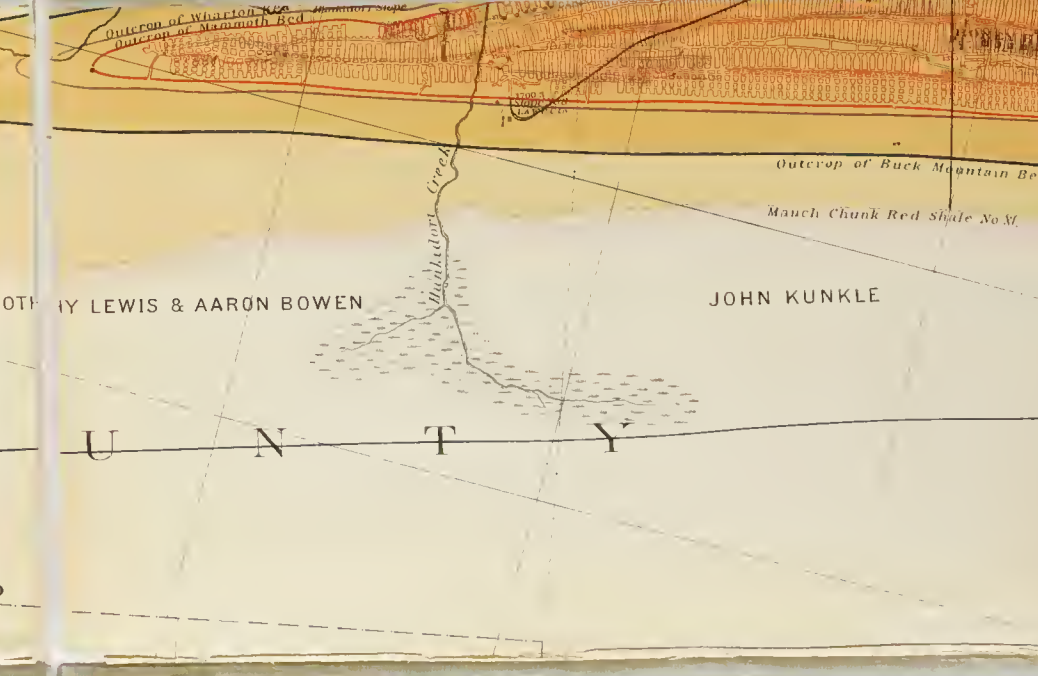
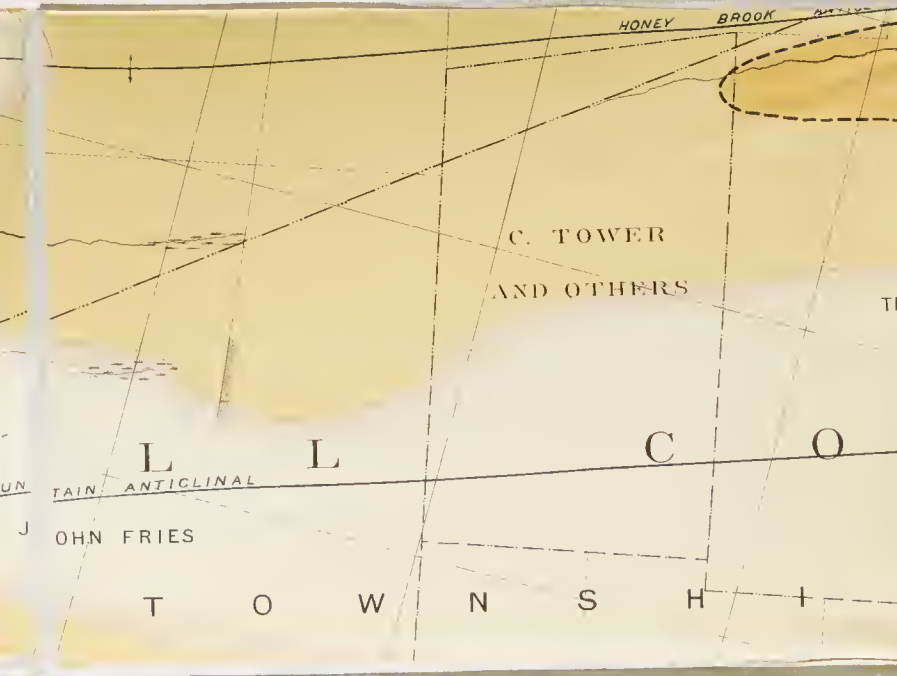
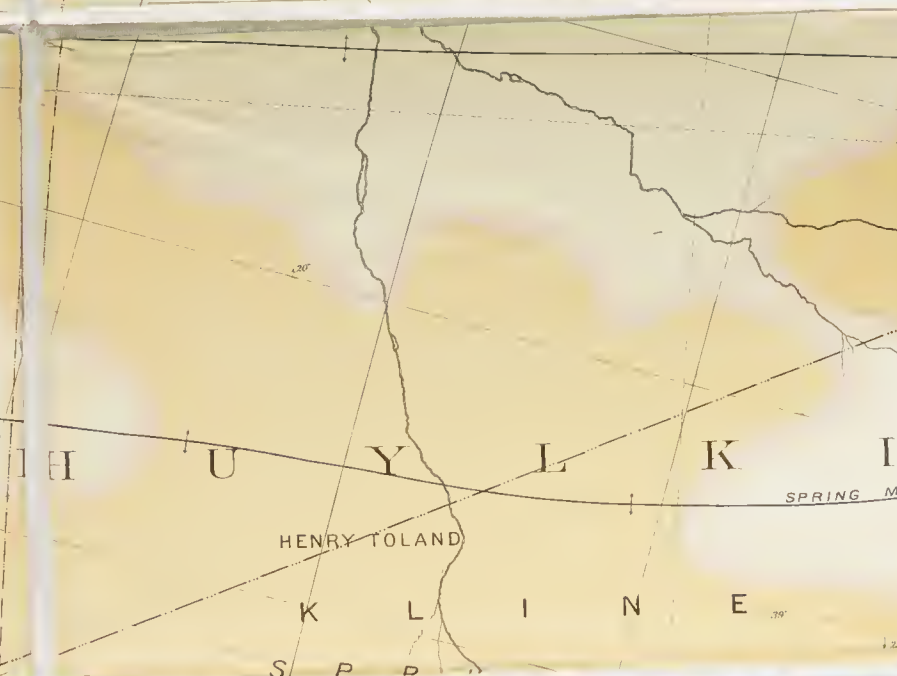
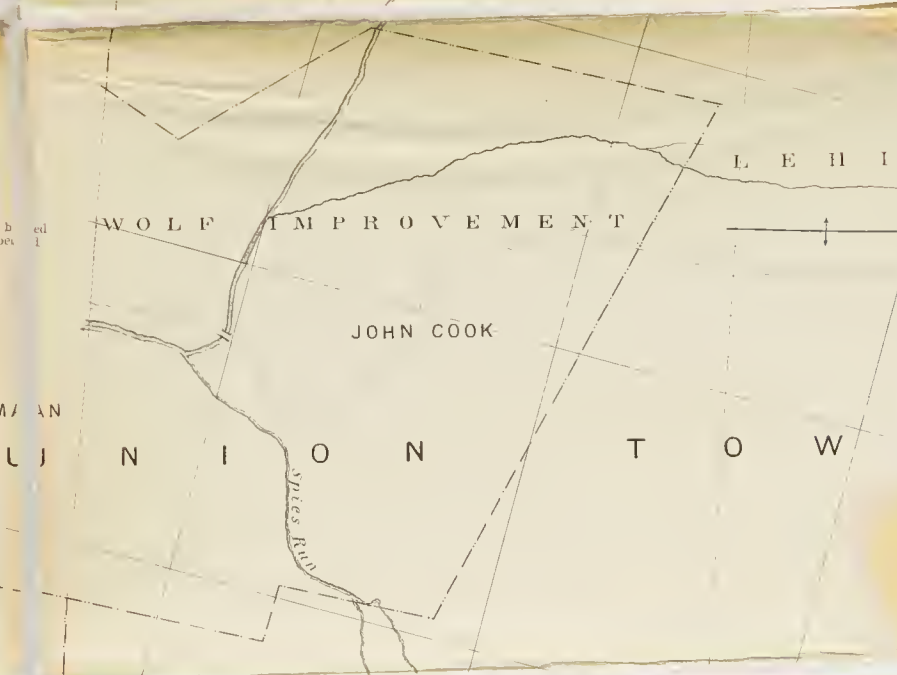
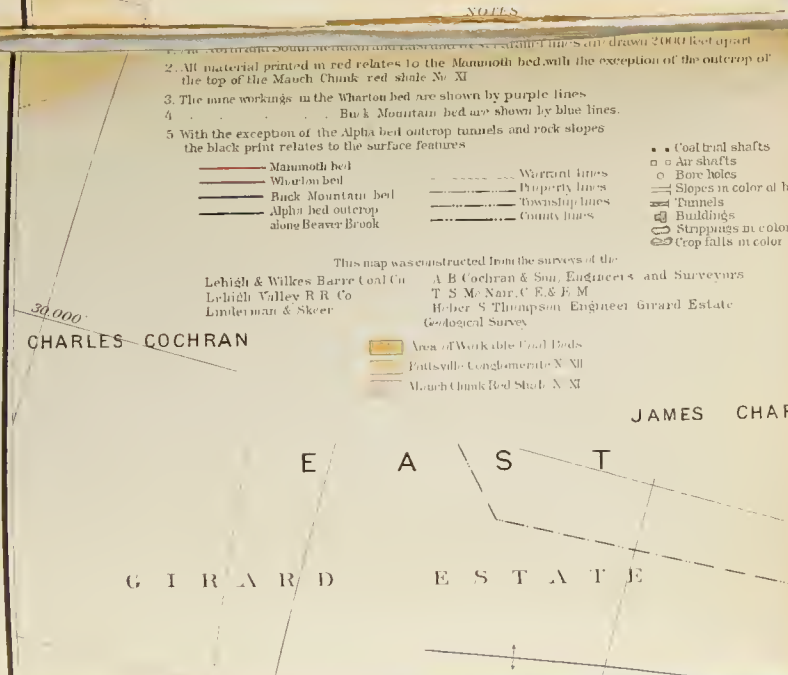
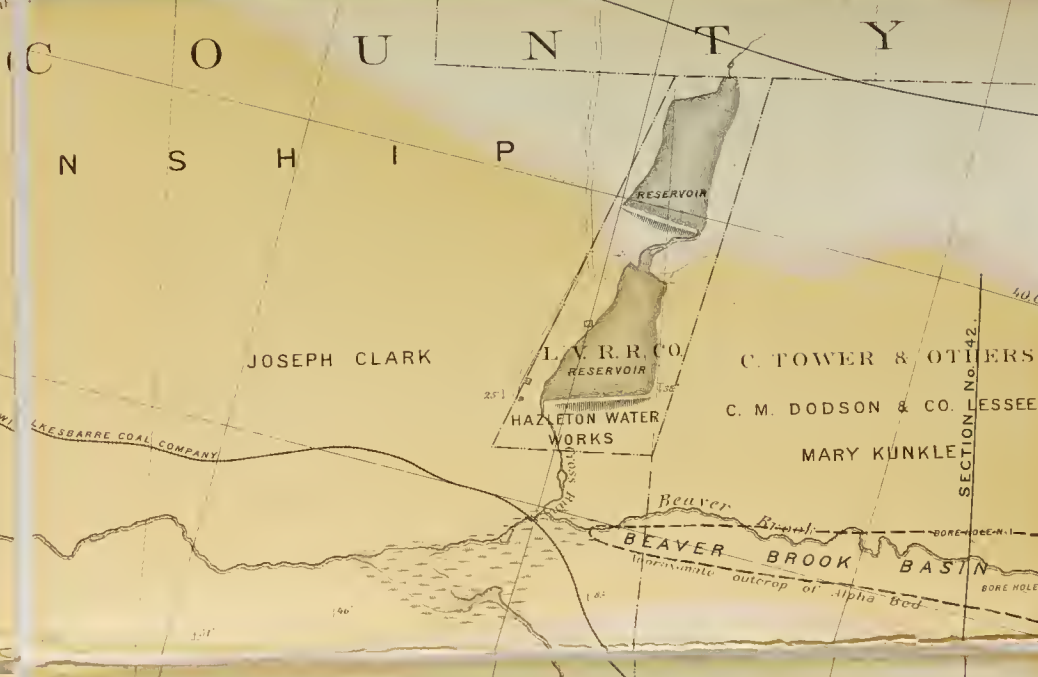
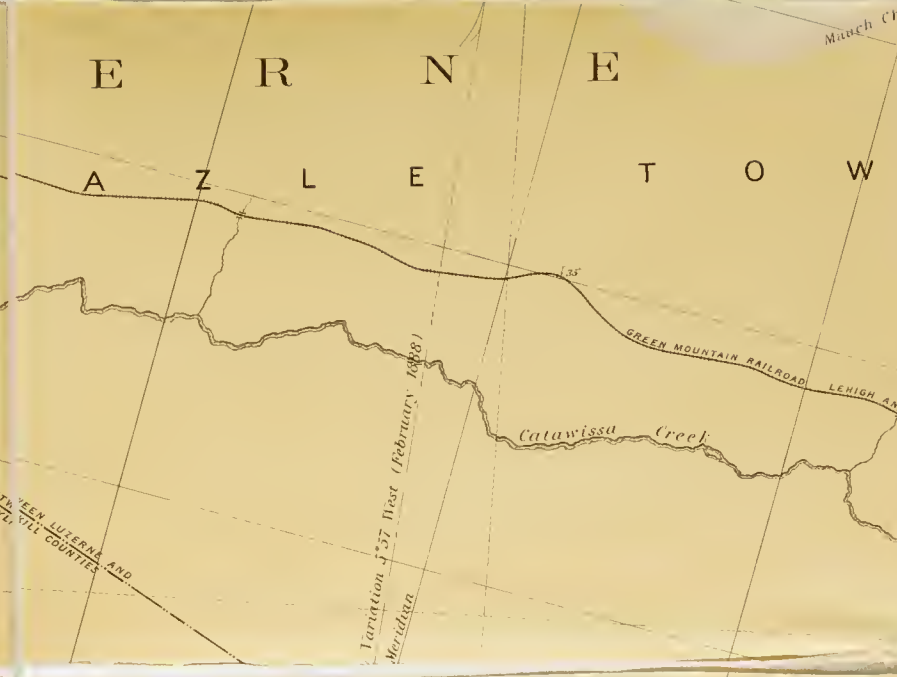
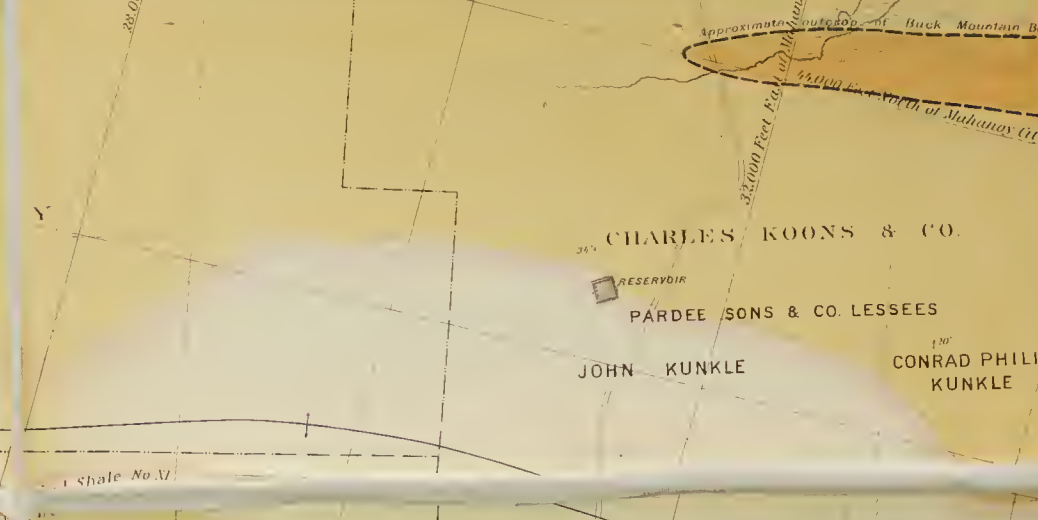
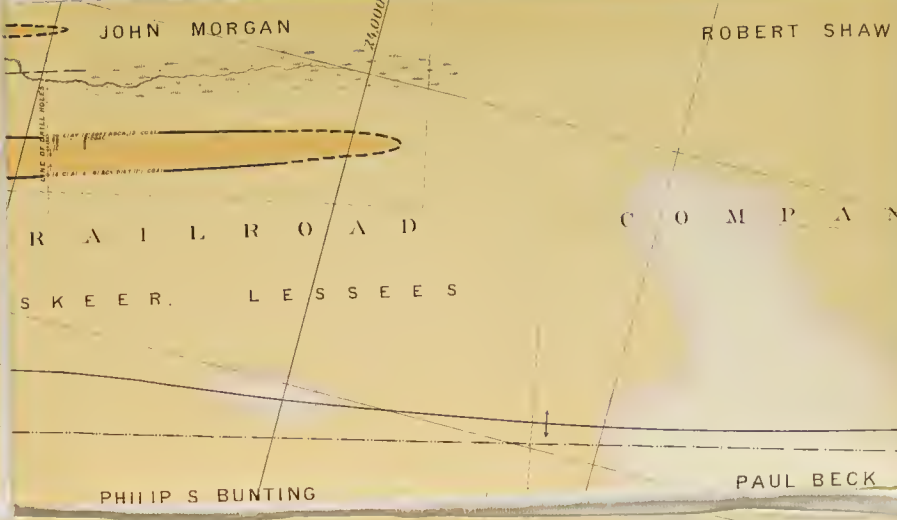
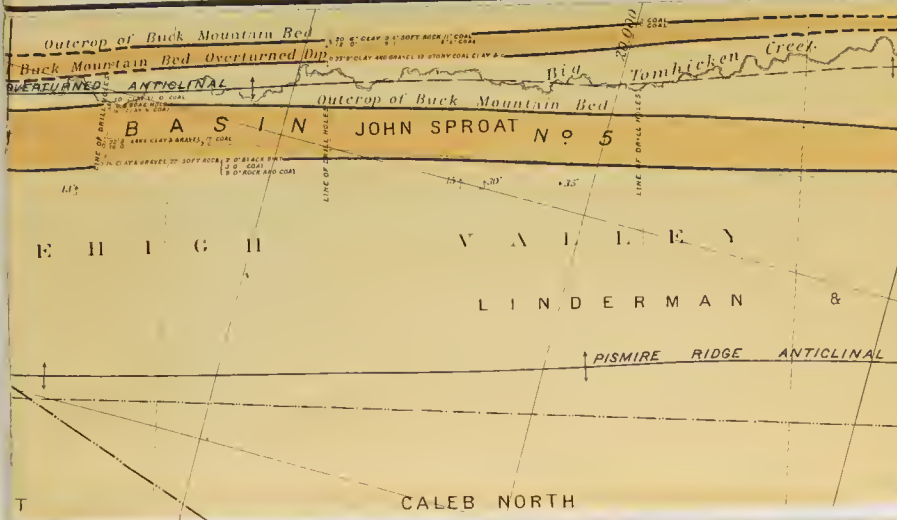
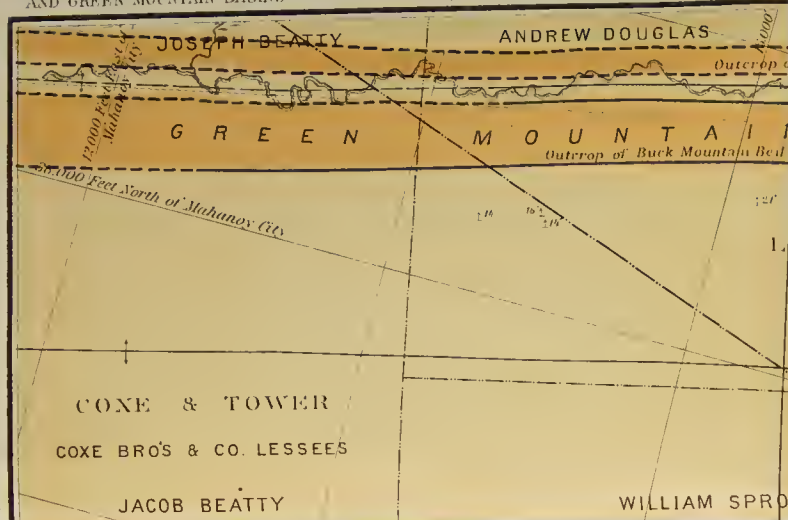
SECTION OF COAL MEASURES
HONEY BROOK SHEET
AUDENRIED No 8 TUNNEL,
AUDENRIED BORE HOLE No 1
LEHIGH & WILKES BARRE COAL CO



GEOLOGICAL SURVEY OF PENNSYLVANIA. J. P. LESLEY, STATE GEOLOGIST
ANTHRACITE DISTRICT. FRANK A. HILL, GEOLOGIST IN CHARGE

EASTERN MIDDLE COAL FIELD MINE SHEET No. X

SPRING MOUNTAIN, HONEY BROOK, BEAVER BROOK
AND GREEN MOUNTAIN BASINS



EASTERN MOUNTAIN AUTOMOBILE FIELD - 11/14/21 - SHEET NO. 2

A A

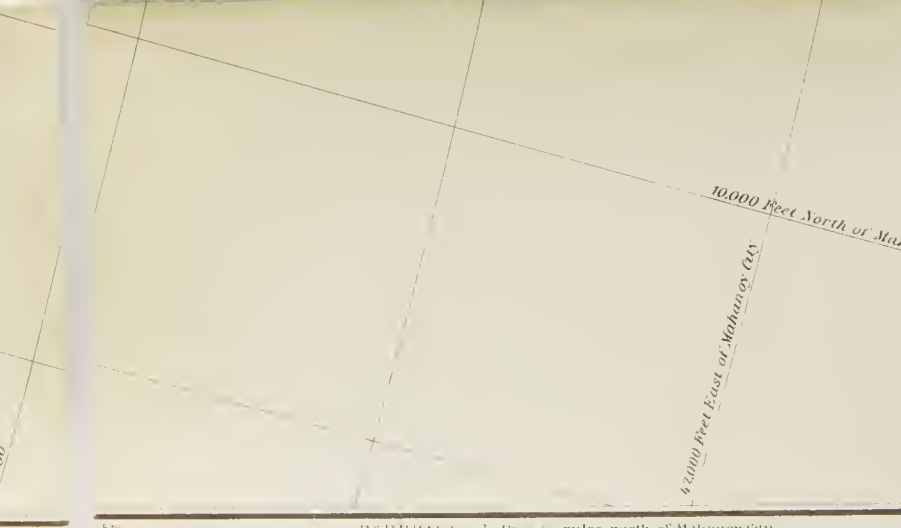
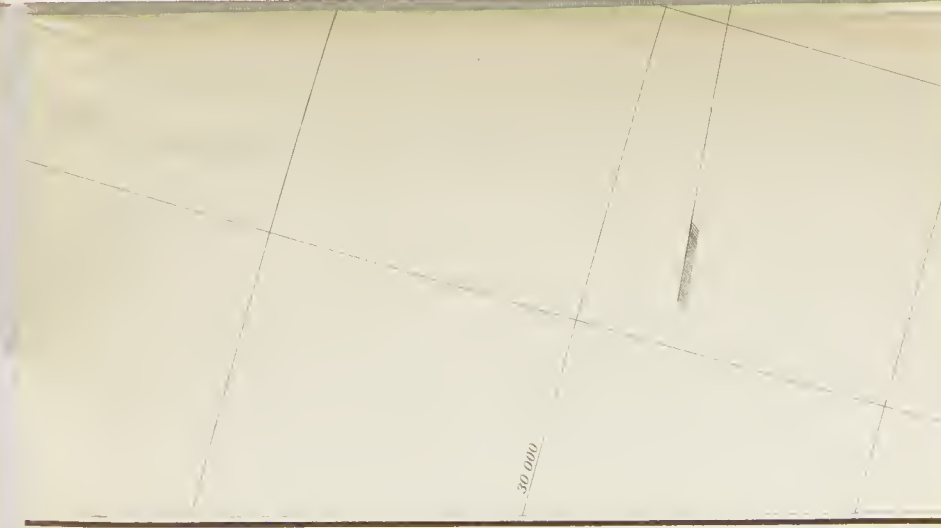
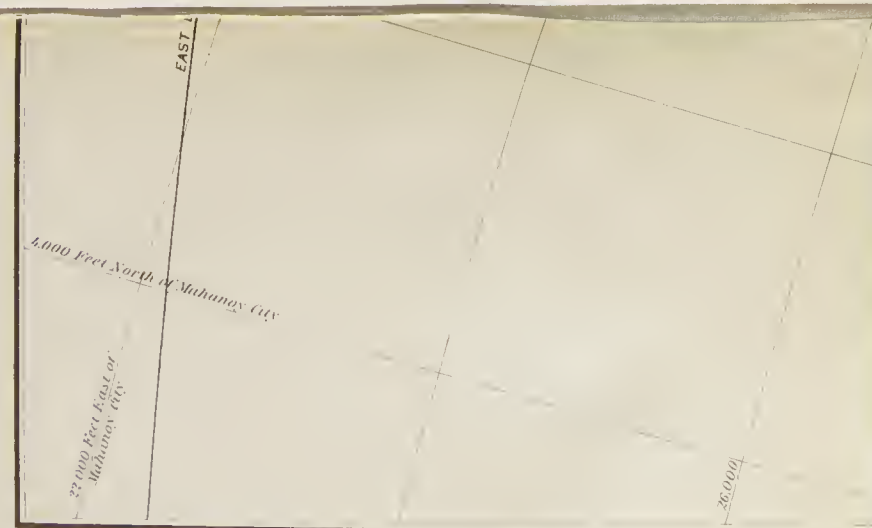
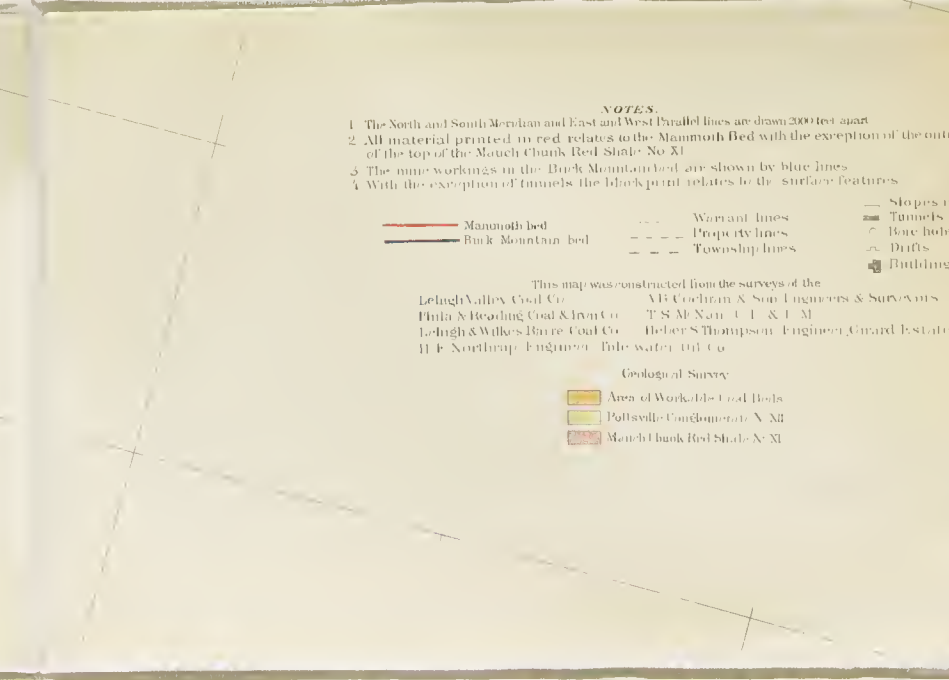
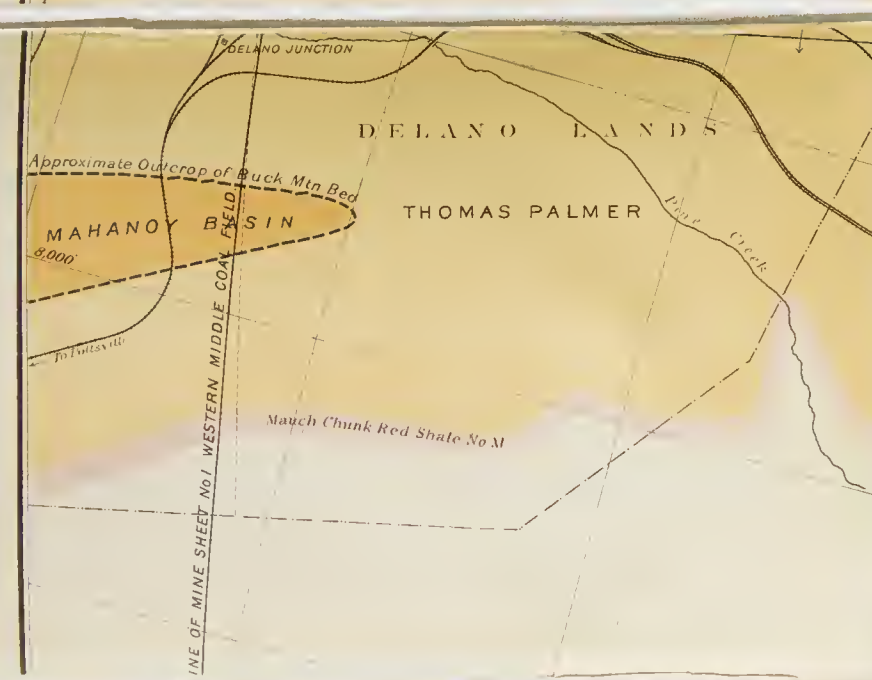
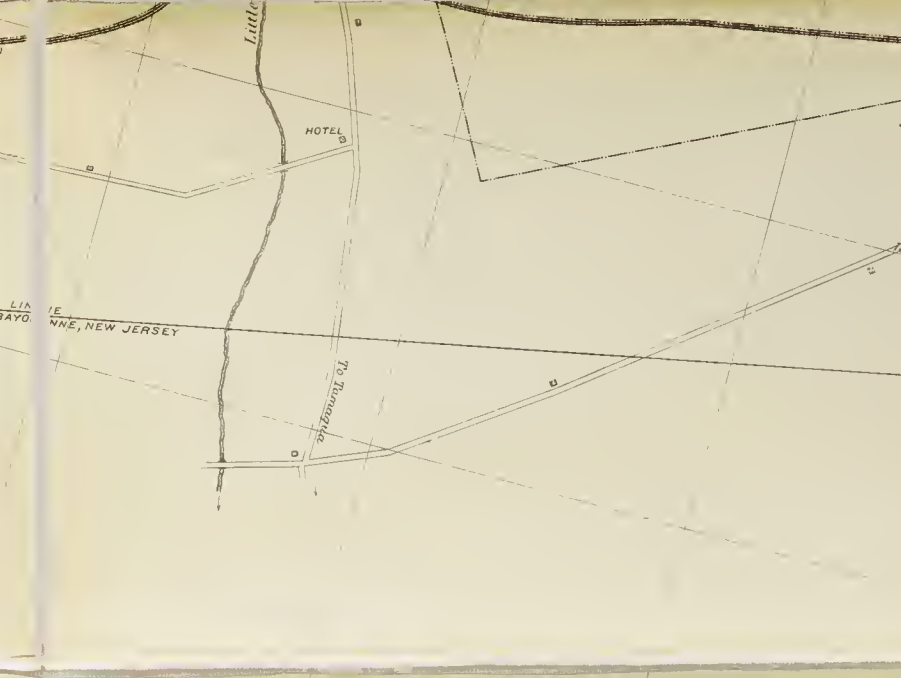
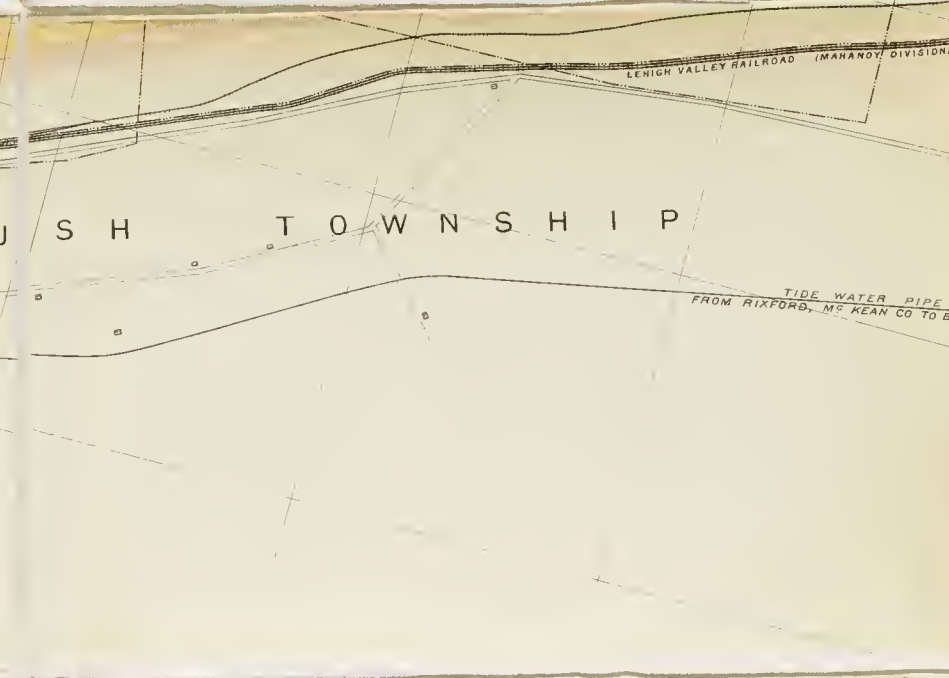
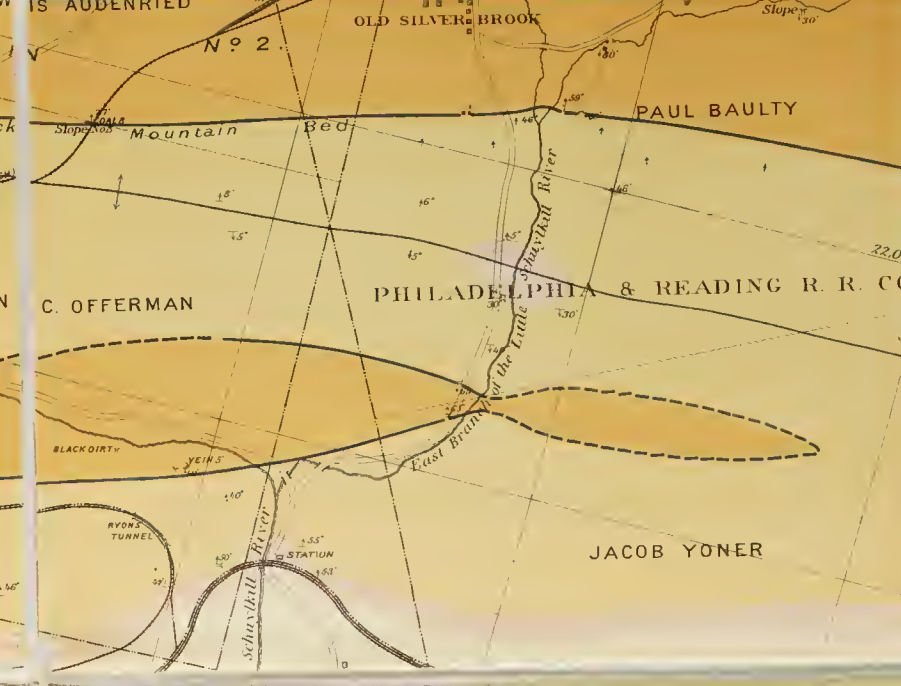
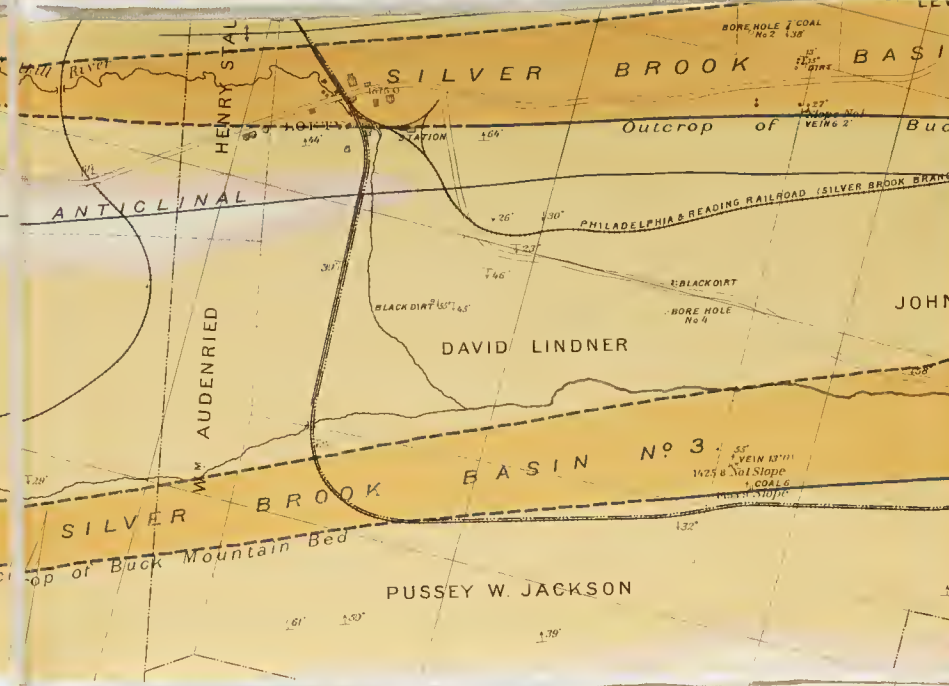
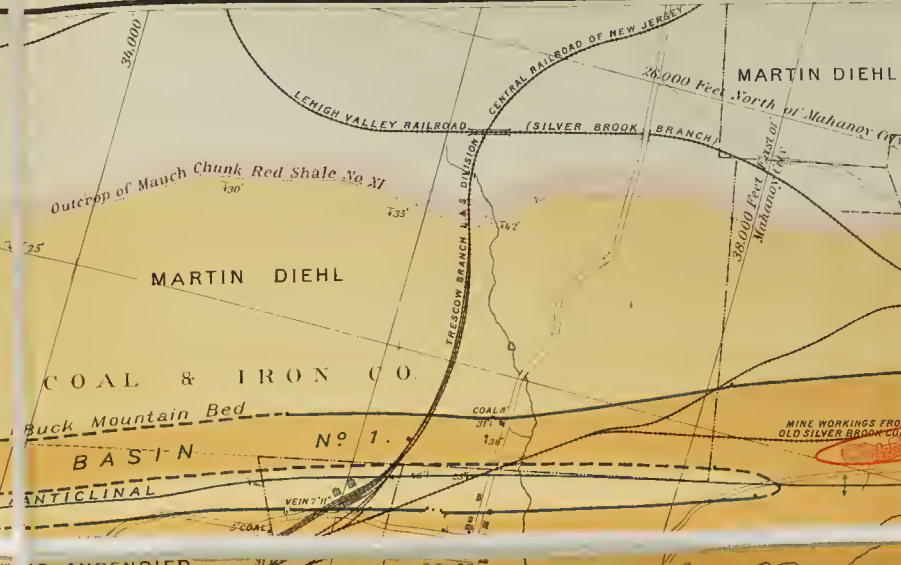
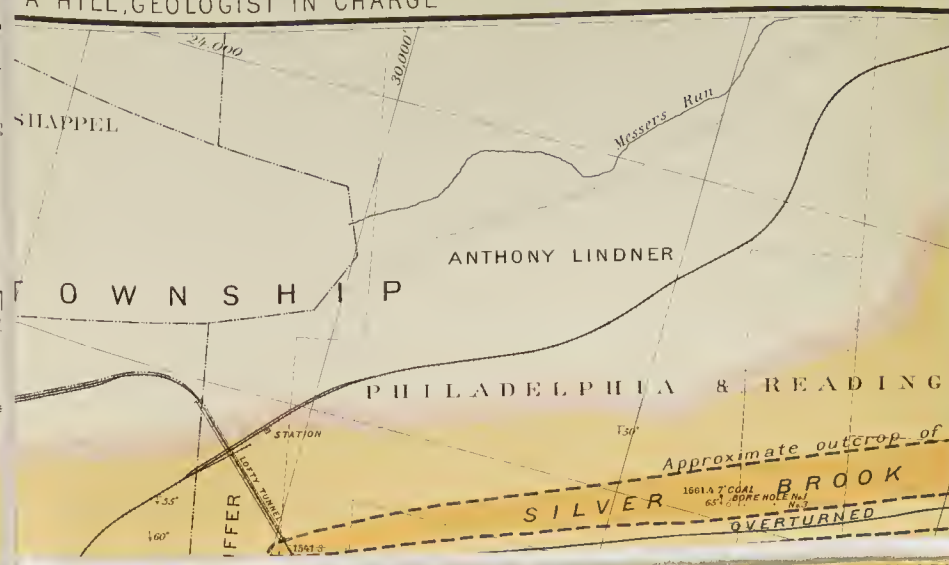
557
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V.P.

(Coring)

4



NOTES

1. The North and South Meridian and East and West Parallel lines are drawn 300 feet apart.
2. All material printed in red relates to the Mammoth field with the exception of the entire top of the top of the Mouchy Creek Bed (S. 31).
3. The map workings on the North Meridian are shown by blue lines.
4. With the exception of tunnels the block print lines are the surface features.

— Mammoth bed

— Buck Mountain bed

--- Warm and lines

--- Propriety lines

--- Township lines

■ Shingles in valley

■ Tunnels

○ Bare beds

○ Drifts

■ Buildings

This map was constructed from the surveys of the

Delight Valley Coal Co.

First & Second Coal & Lignite

L. Delight & Wilkes Iron Co. Ltd.

H. E. Worthing Engineers, Delo water, etc.

U. C. Graham & Son, Engineers & Surveyors

T. S. K. Van C. L. K. M.

Helen Thompson, Engineer, Grand Estate

Geological Survey

■ Area of Work, Mouchy Creek

■ Pottsville-Carboniferous N. XI

■ Mouchy Creek Bed (M. N. XI)